SHEET INDEX

SHEETS NOT USED: 7, 12, 62, 99, 126, 127, 160, 161, 172, 173, 184, 263, 589, 591-625, 693, 736, 744, 818 - 822, 828, 829, 844, 857-863, 865 - 882, 925, 991, 992, 1747, 1755, 1810

NOTE:
RIGHT OF WAY PLANS FOR THIS PROJECT WERE PREPARED AS PART OF PROJECT FRA-70-12.68 PID 77372 / 3084-E AND ARE NOT INCLUDED IN THIS PLAN SET.

NO.	DESCRIPTION	REV. BY	DATE
1	UPDATED SHEETS	CWL	11-5-2021
2	UPDATED SHEETS	CWL	11-12-2021
4	ADDED SHEET	CWL	11-29-2021

CITY OF COLUMBUS:

APPROVED Steven Waverly
DATE 5/26/2020 DESIGN SECTION ENGINEER, DIVISION OF DESIGN AND CONSTRUCTION

APPROVED
DATE 5/28/2020 ADMINISTRATOR, DIVISION OF POWER

APPROVED
DATE 5/28/2020 ADMINISTRATOR, DIVISION OF WATER

APPROVED Lt. Willie Leper
DATE 5/28/2020 FIRE PREVENTION BUREAU, DIVISION OF FIRE

APPROVED MDT RMV John Newsome
DATE 5/28/2020 ADMINISTRATOR, DIVISION OF SEWERAGE AND DRAINAGE

APPROVED Tracie Davies by RMR
DATE 6/3/2020 DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES

APPROVED Don E. Evans for Paul Rakosky
DATE 5/29/2020 DIRECTOR, DEPARTMENT OF RECREATION AND PARKS

APPROVED James Young
DATE 8/24/2020 CITY ENGINEER/ADMINSTRATOR, DIVISION OF DESIGN AND CONSTRUCTION

APPROVED Jennifer Gallagher
DATE 8/24/2020 DIRECTOR, DEPARTMENT OF PUBLIC SERVICE

APPROVED Brian Mickley
DATE 5/28/2020 ENGINEERING SUPERVISOR, DEPARTMENT OF TECHNOLOGY

CITY OF COLUMBUS APPROVALS

CITY OF COLUMBUS SIGNATURES ON THIS PLAN SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES AND GENERAL LOCATION OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS.

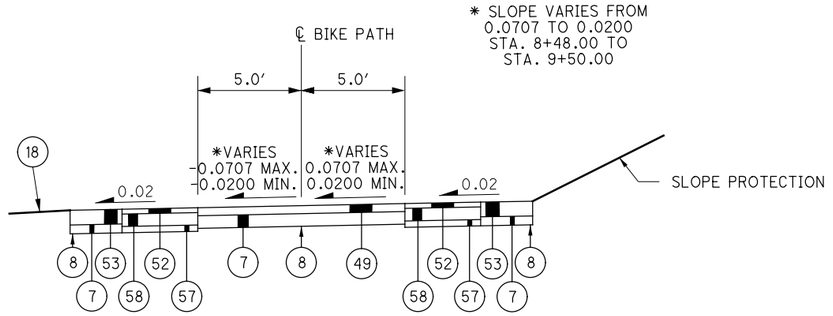
ENGINEERS SEAL:	ENGINEERS SEAL:	ENGINEERS SEAL:	ENGINEERS SEAL:	ENGINEERS SEAL:	ENGINEERS SEAL:	ENGINEERS SEAL:	ENGINEERS SEAL:
FOR SHEETS 70 - 210	FOR SHEETS 804 - 864, 889A - 891, 893 - 900, 905, 922 - 922C, 926 - 930, 938B - 941A	FOR SHEETS 1122 - 1162	FOR SHEETS 1163 - 1205A	FOR SHEETS 1206 - 1225, 1747 - 1815	FOR SHEETS 1228 - 1363, 1472 - 1563	FOR SHEETS 692 - 803, 865 - 889, 892, 901 - 902, 1364 - 1471C, 1564 - 1746R	FOR ENTIRE PLAN EXCEPT SHEETS OTHERWISE NOTED
STATE OF OHIO EMILIE M. WORLEY E-71927 REGISTERED PROFESSIONAL ENGINEER	STATE OF OHIO WILLIAM CRAIG BRUCE III E-56333 PROFESSIONAL ENGINEER	STATE OF OHIO JOY M. LANHAM PE-75259 REGISTERED PROFESSIONAL ENGINEER	STATE OF OHIO JORDAN C. STEELE E-76138 REGISTERED PROFESSIONAL ENGINEER	STATE OF OHIO TIMOTHY S. SCHMALENBERGER 621 REGISTERED LANDSCAPE ARCHITECT	STATE OF OHIO CRAIG A SNIVELY E-57757 REGISTERED PROFESSIONAL ENGINEER	STATE OF OHIO DAVIN GIM NG 56972 REGISTERED PROFESSIONAL ENGINEER	STATE OF OHIO MARK R. GROSSMAN E-61120 REGISTERED PROFESSIONAL ENGINEER
SIGNED: Emilie M Worley	SIGNED: William C. Bruce Add, P.E.	SIGNED:	SIGNED:	SIGNED:	SIGNED: Craig A. Snively	SIGNED:	SIGNED:
DATE: 9/6/19	DATE: 8/16/19	DATE: 9/6/19	DATE: 9/6/19	DATE: 9/6/19	DATE:	DATE: 9/6/19	DATE: 9/6/19

CALCULATED ATR CHECKED CWL

SHEET INDEX, ENGINEERS SEALS & COLUMBUS SIGNATURES

FRA-70/71-12.68/14.86

3486 Dr. E

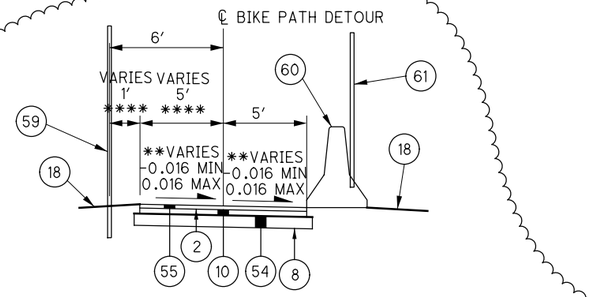


* SLOPE VARIES FROM 0.0707 TO 0.0200 STA. 8+48.00 TO STA. 9+50.00

BIKE PATH SECTION

LIMITING STATIONS
STA. 8+48.00 TO STA. 11+53.75

NOTE A:
10′ ON EACH SIDE OF EXISTING MAIER PLACE SHALL BE 8″ CONCRETE WALK W/ DETECTABLE WARNING
STA. 2+31.62 TO STA. 2+41.62
STA. 2+63.67 TO STA. 2+73.67



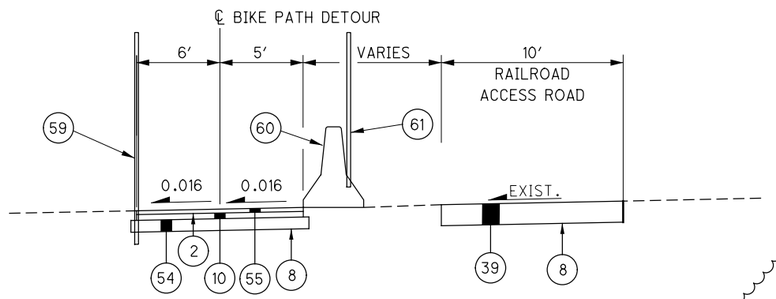
BIKE PATH DETOUR

LIMITING STATIONS
STA. 1+37.10 TO STA. 2+41.62 (SEE NOTE A)
STA. 2+63.67 TO STA. 5+14.72 (SEE NOTE A)
STA. 5+32.66 TO STA. 15+54.32 ***
STA. 19+35.78 TO STA. 22+32.33 ***

**** WIDTHS 1′ / 5′ EXCEPT:
VARIES 1′ TO 0′ / 5′ TO 6′
STA. 13+65.50 TO 13+90.50
0′ / 6′
STA. 13+90.50 TO STA. 15+54.32
0′ / 6′
STA. 19+35.78 TO STA. 21+46.63
VARIES 0′ TO 1′ / 6′ TO 5′
STA. 21+46.63 TO 21+71.63

** SLOPE:
EXIST. TO -0.016 STA. 1+37.10 TO STA. 1+50.00
-0.016 STA. 1+50.00 TO STA. 2+25.00
-0.016 TO EXIST. STA. 2+25.00 TO 2+41.62
EXIST. TO 0.016 STA. 2+63.67 TO 3+00.00
0.016 STA. 3+00.00 TO STA. 5+00.00
0.016 TO EXIST. STA. 5+00.00 TO STA. 5+14.72
EXIST TO 0.016 STA. 5+32.66 TO 5+50.00
0.016 STA. 5+50.00 TO STA. 13+50.00
0.016 TO -0.016 STA. 13+50.00 TO STA. 14+00.00
-0.016 STA. 14+00.00 TO STA. 15+54.32
-0.016 TO 0.016 STA. 19+35.78 TO STA. 19+50.00
0.016 STA. 19+50.00 TO STA. 22+00.00
0.016 TO EXIST. STA. 22+00.00 TO STA. 22+32.33

*** LIMITS:
(59) STA. 13+78.34 TO STA. 15+54.32
STA. 19+35.78 TO STA. 21+46.63
(60) (61) STA. 13+90.50 TO STA. 15+54.32
STA. 19+35.78 TO STA. 21+46.63



BIKE PATH DETOUR

LIMITING STATIONS
STA. 15+54.32 TO STA. 19+35.78

NO.	DESCRIPTION	REV. BY	DATE
4	WIDENED BPD	CWL	11-29-2021

FOR PROPOSED LEGEND, SEE SHEET 20
FOR CONCRETE PAVER AND RIPRAP DETAILS, SEE SHEET 582
FOR BIKE PATH DETOUR PLANS, SEE SHEET 636 - 643R

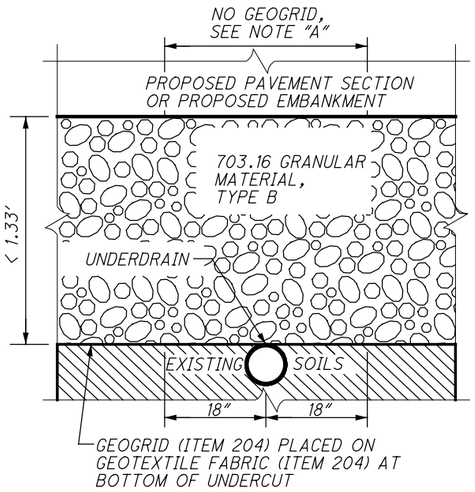
TYPICAL SECTIONS

FRA-70/71-12.68/14.86

ROADWAY

SUBGRADE STABILIZATION

THIS INVOLVES THE PLACEMENT OF GRANULAR MATERIAL, TYPE B FOR THE LOCATIONS OF UNSUITABLE MATERIALS AS VERIFIED AND DELINEATED BY THE ENGINEER.



NOTE "A":
THE CONTRACTOR SHALL SUSPEND THE USE OF GEOTEXTILE FABRIC AND GEOGRID WITHIN 18" OF EITHER SIDE OF A CONFLICTING UNDERDRAIN.

DETAIL - UNDERCUT/ REPLACEMENT TREATMENT METHOD

NOT TO SCALE

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.

2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE COMPACTING THE SUBGRADE WHEN ENCOUNTERED DURING CONSTRUCTION AND AS DIRECTED BY THE ENGINEER. UNSUITABLE SUBGRADE HAS NOT BEEN IDENTIFIED THROUGH THE EXPLORATION PROGRAM. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GRATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO 204.05.

3. COMPACT THE SUBGRADE ACCORDING TO 204.03.

4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.

PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO 204.06.

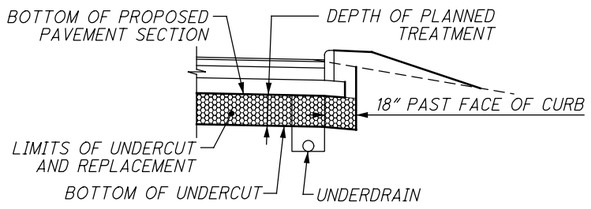
5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.

6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO 204.06 TO VERIFY STABILITY.

7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE.

SEE PAVEMENT SUBGRADE IMPROVEMENT SCHEDULE ON THIS PAGE FOR LOCATIONS AND STATION LIMITS OF EXCAVATE AND REPLACE STABILIZATION.



TYPICAL PAVEMENT SUBGRADE CROSS SECTION

PAVEMENT SUBGRADE IMPROVEMENT SCHEDULE

ALIGNMENT	BEGIN STATION	END STATION	SUBGRADE METHOD	DEPTH OF TREATMENT	RECONSTRUCTION SIDE
FUTURE I-70 EB	125+96.00	126+97.69	CEMENT	14"	FULL WIDTH
FUTURE I-70 EB	128+26.12	129+50.00	CEMENT	14"	FULL WIDTH
FUTURE I-70 EB	129+50.00	134+05.00	CEMENT	14"	RIGHT
I-70 EB	4157+88.17	4166+21.70	CEMENT	14"	RIGHT
I-70 EB	4158+50.35	4166+01.56	CEMENT	14"	LEFT
I-70 EB	4169+93.98	4172+00.00	CEMENT	14"	FULL WIDTH
I-70 EB	4180+82.06	4186+25.00	CEMENT	14"	FULL WIDTH
I-70 EB	4186+25.00	4205+28.94	CEMENT	14"	RIGHT
I-70 EB	4186+25.00	4208+14.77	CEMENT	14"	LEFT
I-71 NB	252+86.40	262+00.00	CEMENT	14"	FULL WIDTH
I-71 NB	269+00.00	273+64.54	CEMENT	14"	FULL WIDTH
RAMP A5	5003+23.96	5008+50.00	CEMENT	14"	FULL WIDTH
RAMP C3	3005+50.00	3009+00.00	CEMENT	14"	FULL WIDTH
RAMP C5	5024+38.21	5031+36.49	CEMENT	14"	FULL WIDTH
RAMP C5	5062+13.35	5064+00.00	CEMENT	14"	FULL WIDTH
FRONT ST.	147+75.00	148+61.92	UNDERCUT	12"	FULL WIDTH
FRONT ST.	151+19.35	152+50.00	UNDERCUT	12"	FULL WIDTH
FRONT ST.	155+13.37	156+03.49	UNDERCUT	12"	INTERSECTION
FULTON ST.	19+58.05	23+15.00	UNDERCUT	12"	FULL WIDTH
MOUND ST.	11+49.86	12+53.78	UNDERCUT	12"	INTERSECTION
SOUDER AVE.	5+61.73	6+12.28	UNDERCUT	12"	RIGHT
SOUDER AVE.	5+63.70	6+13.55	UNDERCUT	12"	LEFT
LIVINGSTON AVE.	200+04.62	202+45.02	UNDERCUT	12"	FULL WIDTH
LIVINGSTON AVE.	204+02.13	207+47.00	UNDERCUT	12"	FULL WIDTH

ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT AT THE FOLLOWING LOCATIONS:

RAMP C5
FRA-70-1358A STA. 5074+10.84 TO STA. 5076+10.84
FRA-70-1373A STA. 5079+95.31 TO STA. 5080+45.86

I-70 EB
FRA-70-1373R STA. 4175+43.32 TO STA. 4175+93.32

ITEM 203 - EMBANKMENT, AS PER PLAN "A"

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT AT THE FOLLOWING LOCATIONS:

RAMP C5
FRA-70-1301A STA. 5039+37.46 TO STA. 5041+87.96
FRA-70-1358A STA. 5069+48.10 TO STA. 5071+48.10
FRA-70-1373A STA. 5081+38.82 TO STA. 5081+88.82

RAMP A5
FRA-71-1518A STA. 5013+36.09 TO STA. 5015+36.09

I-70 EB
FRA-70-1373R STA. 4176+87.83 TO STA. 4177+37.83

GUARDRAIL/BARRIER WORK AT PROPOSED SIGNS OUTSIDE OF PROJECT LIMITS

THE TRAFFIC CONTROL PLANS ON SHT. NO. 1014 - 1082AINCLUDE THE CONSTRUCTION OF OVERHEAD SIGNS WHICH ARE LOCATED OUTSIDE OF THE ROADWAY PROJECT AREA. THE PROPOSED SIGN CONSTRUCTION REQUIRES THE REMOVAL AND REPLACEMENT OF THE EXISTING MEDIAN BARRIER AS PER ODOT STANDARD DRAWINGS AND DETAILS ON SHEETS 645- 646.

ESTIMATED QUANTITIES FOR SIGNS OUTSIDE OF PROJECT LIMITS

ITEM	DESCRIPTION	UNIT	SIGN REFERENCE NUMBER				TOTAL	
			OSS-201	OSS-203	OSS-204			
202	CONCRETE BARRIER REMOVED	FT	90	90	90		270	
622	BARRIER, MISC.: CONCRETE BARRIER, TYPE B	FT	80	80	80		240	

ITEM 203 - EMBANKMENT, AS PER PLAN "B"

FOR THE VOID CREATED TO EXCAVATE AND CONSTRUCT THE PROPOSED TYPE D BARRIER, AS PER PLAN ALONG THE RIGHT SIDE OF I-71 NB FROM STA. 252+86.40 TO STA. 256+72.79, UTILIZE THE EXISTING EXCAVATED IMPERVIOUS MATERIAL OR OTHER SUITABLE IMPERVIOUS MATERIAL AS BACKFILL AND COMPACT TO FILL THE VOID CREATED BEHIND THE PROPOSED BARRIER WALL. CONTRACTOR TO MINIMIZE IMPACTS TO THE EXISTING LEVEE DURING CONSTRUCTION ACTIVITIES AS SET FORTH IN THE 408 PERMIT AND THE EMERGENCY ACTION PLAN.

EXCAVATION AND BACKFILL COMPACTION SHALL BE PER ODOT CMS 203 AND THE MOST RECENT USACE STANDARD OPERATING PROCEDURE (SOP) FOR EXCAVATION BENCHING AND/OR BACKFILL COMPACTION FOR LEVEE AND FLOODWALL MODIFICATIONS (14 JUNE 2021 LATEST VERSION). USACE PROCEDURES AND GUIDANCE SHALL SUPERCEDE AND SHALL BE FOLLOWED FOR ALL ALL EXCAVATION BENCHING AND BACKFILL WITHIN THE LEVEE EMBANKMENT AND WITHIN 15 FEET OF THE TOE OF THE LEVEE OR FACE OR FLOODWALL. ALL LEVEE EMBANKMENT MATERIAL AND LEVEE FOUNDATION MATERIAL DISTURBED DURING EXCAVATION FOR THE INSTALLATION OF THE TYPE D BARRIER AND THE OVERLAPPING OF THE I-WALL SECTION SHALL BE REPLACED ACCORDING THE USACE SOP.

ALL LABOR , EQUIPMENT AND MATERIALS NECESSARY TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 - EMBANKMENT, AS PER PLAN "B".

QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 69A

NO.	DESCRIPTION	REV. BY	DATE
4	UPDATED 203 NOTES	CWL	11-29-2021

CALCULATED ATR
CHECKED CWL

GENERAL NOTES

FRA-70/71-12.68/14.86

D:\2012\2012048\FRA\105523\ROADWAY\SHEETS\105523GN0024A.DGN
11/24/2021
8:43:37 AM
ODOTVeistID.USER

ENVIRONMENTAL (CONTINUED)

LOWER SCIOTO BIKEWAY (LSB), SCIOTO AUDUBON METRO PARK (SAMP) DODGE PARK

SEE SHEETS 629 - 635 FOR LSB PLANS.
SEE SHEETS 636 - 643 FOR LSB DETOUR PLANS.
SEE SHEET 1049 FOR LSB DETOUR TRAFFIC CONTROL PLANS.

1. THE LSB DETOUR WILL BE CONSTRUCTED AS SHOWN ON SHEETS 636 - 643 AND RECONNECT TO THE EXISTING TRAIL SYSTEM.

2. THE CONTRACTOR WILL KEEP OPEN EITHER THE LSB OR THE LSB DETOUR IN ORDER TO MINIMIZE INTERACTION BETWEEN TRAIL USERS AND CONSTRUCTION ACTIVITIES, EXCEPT FOR THE TWO-WEEK PARK CLOSURE PERIODS. BOTH TRAILS MUST BE CLOSED WHEN THE PARK IS CLOSED TO ENSURE THE SAFETY OF TRAIL USERS.

3. TO ENABLE THE CONTRACTOR TO HAUL MATERIALS TO THE PROJECT SITE, THE SAMP SHALL BE ALLOWED TO BE CLOSED FOR A PERIOD OF TWO (2) WEEKS BETWEEN JANUARY 1, 2022 AND MARCH 15, 2022 AND AGAIN BETWEEN NOVEMBER 1, 2022 AND MARCH 15, 2023. THE CONTRACTOR MUST NOTIFY ODOT AT LEAST 14 DAYS IN ADVANCE OF THE REQUESTED CLOSURE.

4. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE GRANGE INSURANCE AUDUBON CENTER, PRIVATE BUSINESSES, AND UTILITY COMPANY PROPERTIES DURING THE 2-WEEK CLOSURE PERIODS OF THE SAMP.

5. OUTSIDE THE 2-WEEK CLOSURE PERIODS, TRUCK DELIVERIES WILL BE ALLOWED FROM 9:00 PM THRU 6:00 AM APRIL 1 THRU SEPTEMBER 30 AND 6:00 PM TO 7:00 AM OCTOBER 1 THRU MARCH 31. OUTSIDE OF THOSE DESIGNATED HOURS, ONLY TRUCKS WITH A TOTAL WEIGHT OF LESS THAN 13 TONS WILL BE ALLOWED TO BE WITHIN THE SAMP.

6. ANY CONCRETE POUR THAT IS LARGER THAN 200 CUBIC YARDS IS TO BE PERFORMED OUTSIDE OF SAMP HOURS (6:30 AM TO 8:00 PM). CONCRETE POURS SMALLER THAN 200 CUBIC YARDS MAY BE PERFORMED DURING NORMAL SAMP HOURS. THIS WILL BE THE ONLY EXCEPTION TO THE TONNAGE RESTRICTION ABOVE. THE CONTRACTOR WILL INSTALL SIGNAGE AT THE PARK ENTRANCE TO NOTIFY USERS OF HIGHER THAN USUAL TRUCK TRAFFIC FOR THESE EVENTS. 4

7. IF ADDITIONAL CLOSURES OF THE LSB OR LSB DETOUR ARE ANTICIPATED, THE CONTRACTOR SHALL NOTIFY THE CITY OF COLUMBUS, FRANKLIN COUNTY METRO PARKS, AND ODOT AT LEAST 7 DAYS BEFORE THE REQUESTED CLOSURE IS TO OCCUR.

8. THE CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION FENCING ALONG THE LSB, LSB DETOUR AND PROPOSED CONSTRUCTION LIMITS TO PROTECT THE SECTION 4(f) PROPERTIES AND THE PUBLIC.

9. 8' TALL FENCING WITH MESH FENCE SCREENING SHALL BE INSTALLED ALONG THE WEST SIDE OF THE LSB DETOUR TO SHIELD TRAIL USERS FROM CONSTRUCTION. PORTABLE BARRIER W/ VANDAL FENCING WILL ALSO BE PROVIDED BETWEEN THE LSB DETOUR AND THE RAILROAD ACCESS ROAD AS SHOWN IN THE PLANS.

10. DURING PERIODS OF NO CONSTRUCTION ACTIVITY, THE EXISTING LSB WILL BE OPEN FOR PUBLIC USE.

11. APPROPRIATE SIGNAGE SHALL BE INSTALLED TO ALERT USERS OF THE SAMP, LSB AND LSB DETOUR OF CONSTRUCTION ACTIVITIES, ACCESS RESTRICTIONS OR CLOSURES, AND TO DIRECT USERS TO SECONDARY ACCESS POINTS.
SEE TRAFFIC CONTROL PLANS ON SHEET 1049.

12. VEHICULAR, PEDESTRIAN, AND BICYCLE ACCESS WILL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACTIVITIES EXCEPT FOR THE 2-WEEK CLOSURE PERIODS OF THE SAMP.

13. NO CONSTRUCTION ACTIVITY SHALL OCCUR DURING RED WHITE AND BOOM AND ONE DAY PRECEDING THE EVENT. THE CONSTRUCTION ACTIVITY LIMITATION DATES FOR RED WHITE AND BOOM FOR EACH YEAR WILL BE PROVIDED TO THE CONTRACTOR BY ODOT.

14. THE CONTRACTOR SHALL BE ALLOWED TO STAGE AND STORE WITHIN THE SAMP AS SHOWN ON SHEET 67A. THE AREA WAS PREVIOUSLY OCCUPIED BY A DOG PARK WHICH CONTAINED A SHELTER HOUSE AND WATER FOUNTAIN. THE WATER LINE REMAINS IN PLACE. THE CONTRACTOR WILL PRESERVE THE WATERLINE DURING CONSTRUCTION. ADDITIONALLY, THIS AREA IS PROTECTED BY A 2' SOIL CAP. AT NO TIME WILL THE CONTRACTOR DISTURB THIS CAP.

15. THE STAGING AND/OR STORAGE OF CONSTRUCTION EQUIPMENT SHALL NOT TAKE PLACE OUTSIDE OF THE FENCED CONSTRUCTION LIMITS WITHIN THE DEFINED BOUNDARIES OF THE SAMP.

16. THE CONTRACTOR SHALL BE REQUIRED TO CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH ODOT DISTRICT 6, COLUMBUS RECREATION AND PARKS, AND FRANKLIN COUNTY METRO PARKS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.

17. A REPRESENTATIVE FROM COLUMBUS RECREATION AND PARKS AND FRANKLIN COUNTY METRO PARKS SHALL BE INVITED TO ATTEND ALL CONSTRUCTION RELATED MEETINGS. A SCHEDULE OF CONSTRUCTION ACTIVITIES SHALL BE PROVIDED TO COLUMBUS RECREATION AND PARKS AND SAMP REPRESENTATIVES.

CONTACT INFORMATION:

CITY OF COLUMBUS RECREATION AND PARKS:
BRAD WESTALL - (614) 645-2441
BRWestall@Columbus.gov

FRANKLIN COUNTY METRO PARKS:
DJ WHITE - (614) 445-1076

18. ODOT ADDED A STRUCTURAL PAVEMENT OVERLAY ON MAIER PLACE IN A SEPARATE PROJECT. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF MAIER PLACE FOR THE DURATION OF CONSTRUCTION.

19. CONSTRUCTION CONTRACTOR EMPLOYEE VEHICLES, CONSTRUCTION EQUIPMENT, AND CONSTRUCTION RELATED VEHICLES SHALL UTILIZE MAIER PLACE TO ACCESS THE WORK AREA. CONSTRUCTION CONTRACTOR EMPLOYEES CAN PARK WITHIN THE DESIGNATED CONSTRUCTION AREA OF THE SAMP BUT WILL NOT BE PERMITTED TO PARK IN PARKING LOTS ESTABLISHED FOR PARK USERS.

20. THE LSB AND LSB DETOUR WILL NOT BE USED FOR ACCESS TO THE WORK AREA, EXCEPT AT THE DESIGNATED CROSSINGS WITHIN EACH PHASE.

21. LED LIGHTING FIXTURES SHALL BE INSTALLED FOR THE LSB AND LSB DETOUR BENEATH THE I-70/I-71 BRIDGES. THESE LIGHTS WILL BE POWERED FROM AN ODOT CIRCUIT WITH AN ACCESSIBLE DISCONNECT. LIGHTING FIXTURE MAINTENANCE WILL BE THE RESPONSIBILITY OF THE CITY OF COLUMBUS. SEE LIGHTING PLANS ON SHEET 1185 .

22. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL FULLY RESTORE ANY LAND DISTURBED BY CONSTRUCTION ACTIVITIES.

ITEM 607 - FENCE, TYPE CL, AS PER PLAN

TEMPORARY CHAIN LINK CONSTRUCTION FENCING WILL BE INSTALLED ALONG THE CONSTRUCTION LIMITS OF THE CONSTRUCTION AREA ADJACENT TO THE LOWER SCIOTO BIKEWAY, LOWER SCIOTO BIKEWAY DETOUR, SCIOTO AUDUBON METRO PARK AND DODGE PARK. REMOVAL OF THE TEMPORARY FENCE UPON COMPLETION OF CONSTRUCTION ACTIVITY SHALL BE INCLUDED IN THE CONTRACT PRICE BID.

THE FOLLOWING QUANTITY HAS BEEN PROVIDED:

ITEM 607 - FENCE, TYPE CL, AS PER PLAN 2000 FT

METRO PARK/WHITTIER PENINSULA VAP

THE TEMPORARY PARCEL 3 ON WHITTIER PENINSULA HAS BEEN SUBJECT TO AN OEPA VOLUNTARY ACTION PROGRAM (VAP) BY THE OWNER, COLUMBUS AND FRANKLIN COUNTY METRO PARKS AND AS SUCH THE CONTRACTOR'S WORK BELOW SUBGRADE IS GOVERNED BY THE CONDITIONS CONTAINED IN THE NORTHERN TIER COVENANT NOT TO SUE (CNS) (4/22/10, #08NFA308), THE FORMER LAZARUS DISTRIBUTION CNS (6/14/10, #09NFA330) AND THE SOUTHERN TIER CNS (12/30/15, #14NFA592). THE CNS'S CAN BE FOUND WITHIN THE SPECIAL PROVISIONS FOR THE PROJECT.

EQUIPMENT WITHIN FLOODPLAIN

IF THE CONSTRUCTION EQUIPMENT WILL NOT BE IN USE FOR THE FOLLOWING TWO CALENDAR DAYS, THIS SHALL DEFINE IDLE EQUIPMENT, AND THE CONTRCTOR SHALL MOVE THE EQUIPMENT ABOVE ELEVATION 717 FEET. THE ONLY EXCEPTION TO THIS IS FOR LARGE CRANES AND DRILLING RIGS. THE CONTRACTOR WILL MONITOR THE FRANK ROAD USGS/CORPS SCIOTO RIVER GAUGE SOUTH OF SR-104. ADDITIONALLY, THE CONTRACTOR SHALL MONITOR FORECASTED WEATHER PRECIPITATION USING WEATHER.COM AND MYRADAR.COM. PER THE EMERGENCY NOTIFICATION PROCESS WITHIN THE EMERGENCY ACTION PLAN (EAP), ODOT WILL BE NOTIFIED BY THE CITY OF COLUMBUS WHEN THE RIVER LEVEL REACHES THE TRIGGER ELEVATIONS LISTED IN THE EAP. THE CONTRACTOR SHALL MOVE ALL EQUIPMENT ABOVE ELEVATION 717 FEET WHEN THESE CONDITIONS ARE MET, OR WHEN EQUIPMENT IS CONSIDERED IDLE, AS DEFINED IN THIS PARAGRAPH.

PROTECTION OF DOG PARK SOIL CAP

GEOTEXTILE FABRIC SHALL BE PLACED ON TOP OF EXISTING SOIL PRIOR TO PLACING CONSTRUCTION MATERIALS AND/OR EQUIPMENT WITHIN THE SCIOTO AUDUBON METRO PARK DOG PARK LOCATION. THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR THE PROTECTION OF THE EXISTING SOIL CAP:

ITEM 204 - GEOTEXTILE FABRIC 2000 SY

QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 69A

NO.	DESCRIPTION	REV. BY	DATE
4	UPDATED NOTE	CWL	11-29-2021

CALCULATED ATR
CHECKED CWL

GENERAL NOTES

FRA-70/71-12.68/14.86

SHEET NO.	201 CLEARING AND GRUBBING, AS PER PLAN (LS)		202 REMOVAL MISC.: TRASH RECEPTACLES (EACH)		202 CONCRETE BARRIER REMOVED (FT)		204 GEOTEXTILE FABRIC (SY)		208 VIBRATION CONTROL AND MONITORING, AS PER PLAN (LS)				251 PARTIAL DEPTH PAVEMENT REPAIR (442) (SY)		SPECIAL PAVEMENT OVERLAY FABRIC (SY)		SPECIAL SAWING AND SEALING CONCRETE JOINTS (FT)		601 TIED CONCRETE BLOCK MAT, TYPE 1 (SY)		607 FENCE, TYPE CL, AS PER PLAN (FT)		605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (FT)		611 CONDUIT, MISC.: SEWER VIDEO INSPECTION (FT)	611 6" CONDUIT, TYPE B (FT)		611 6" CONDUIT, TYPE C (FT)		611 CONDUIT, MISC.: BYPASS PUMPING FOR VIDEO INSPECTION AND PIPE REPAIRS (LS)
	01/NHS/PV	01/NHS/PV	01/NHS/PV		01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV			01/NHS/PV		01/NHS/PV	01/NHS/PV	01/NHS/PV	05/NHS/OT/COL	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV
53	LS	LS																												
54			4																											
55													500		102	129														
56					119	151																								
61																	368	44												
63																			4	4			88	112		22	28	22	28	
66A									LS	LS																				
67							880	1120													880	1120								
69																									3300					LS
TOTALS CARRIED TO GENERAL SUMMARY	LS	LS	4		119	151	880	1120	LS	LS			500		102	129	368	44	4	4	880	1120	88	112	3300	22	28	22	28	LS

SHEET NO.	611 6" CONDUIT, TYPE E (FT)		611 6" CONDUIT, TYPE F (FT)		611 PRECAST REINFORCED CONCRETE OUTLET (EACH)		611 CONDUIT, MISC.: INTERNAL JOINT SEAL (EACH)		SPECIAL MISCELLANEOUS METAL (LB)		622 BARRIER, MISC.: CONCRETE BARRIER, TYPE B (FT)		623 PROVIDING ELECTRONIC INSTRUMENTATION (LS)		638 WATER WORK, MISC.: SURVEY COORDINATES (LS)		SPECIAL SURVEY CONTROL VERIFICATION (LS)		SPECIAL WORK INVOLVING NON-REGULATED MATERIALS (TON)		SPECIAL WORK INVOLVING HAZARDOUS WASTE (TON)		SPECIAL WORK INVOLVING SOLID WASTE (TON)		SPECIAL WORK INVOLVING NON-REGULATED WATER (GAL)		SPECIAL WORK INVOLVING REGULATED WATER (GAL)		
	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV		01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV		
54																	LS	LS												
56											106	134																		
58													LS	LS																
63	22	28	110	140	2	2	26	34	440	560																				
66A																			440	560	44	56	220	280	4840	6160	4840	6160		
68															LS															
TOTALS CARRIED TO GENERAL SUMMARY	22	28	110	140	2	2	26	34	440	560	106	134	LS	LS	LS		LS	LS	440	560	44	56	220	280	4840	6160	4840	6160	⚠	

NO.	DESCRIPTION	REV. BY	DATE
1	ADDED LIBERTY RMP NOTE	CWL	11-4-2021
3	UPDATED BYPASS NOTE	CWL	11-19-2021
4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED CJC
CHECKED CWL

GENERAL NOTES SUBSUMMARY

FRA-70/71-12.68/14.86

SHEET NO.	661 DECIDUOUS TREE, 2" CALIPER, AS PER PLAN, CERCIS CANADENSIS - RED BUD EACH		661 DECIDUOUS TREE, 2-1/2" CALIPER, AS PER PLAN, CELTIS OCCIDENTALIS - HACKBERRY EACH		661 DECIDUOUS TREE, 2-1/2" CALIPER, AS PER PLAN, PLATANUS OCCIDENTALIS - SYCAMORE EACH		661 DECIDUOUS TREE, 2-1/2" CALIPER, AS PER PLAN, QUERCUS BICOLOR - SWAMP WHITE OAK EACH		661 PLANTING, MISC.: DECIDUOUS SHRUB, 24" - 36" HEIGHT, VIBURNUM DENTATUM - ARROWWOOD EACH		661 PLANTING, MISC.: DECIDUOUS SHRUB, 24" - 36" HEIGHT, PHYSOCARPUS OPULIFOLIUS - NINEBARK EACH	
4	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV
66	2	3	4	4	5	7	2	3	9	11	9	11
TOTALS CARRIED TO GENERAL SUMMARY	2	3	4	4	5	7	2	3	9	11	9	11

SHEET NO.

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

TOTALS CARRIED TO GENERAL SUMMARY

CALCULATED CJC
CHECKED CWL

GENERAL NOTES SUBSUMMARY

FRA-70/71-12.68/14.86

69B
1815

D:\2012\2012048\FRA\105523\ROADWAY\SHEETS\105523GS026.DGN
11/21/2021
1:43:01 PM
QQDTV81STD_USER

ITEM	EXTENSION	FUNDING SPLIT 01/NHS/PV	FUNDING SPLIT 01/NHS/PV	TOTAL (4)	UNIT	DESCRIPTION	SEE SHEET
410	12000			200	CY	TRAFFIC COMPACTED SURFACE, TYPE A OR B	70
503	11100			LS		COFFERDAMS AND EXCAVATION BRACING	
607	30001	440	560	1000	FT	FENCE, SNOW, AS PER PLAN	
611	05900	2	2	4	FT	15" CONDUIT, TYPE B	
611	07400	55	71	126	FT	18" CONDUIT, TYPE B	
611	98700	0	1	1	EACH	INLET, SIDE DITCH	
611	99114	0	1	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	
611	99500	2	2	4	EACH	INLET, MISC.: LOCAL DEPRESSION REMOVE FROM INLET	
611	99500	0	1	1	EACH	INLET, MISC.: INLET, CAPPED BELOW GRADE	78
611	99574	0	1	1	EACH	MANHOLE, NO. 3	
611	99910	316	402	718	FT	DRAINAGE STRUCTURE, MISC.: LONGITUDINAL TRENCH DRAIN FOR MOT	78
614	11000			LS		MAINTAINING TRAFFIC	70
614	11110	1980	2520	4500	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	73
614	11630	16786	21364	38150	FT	INCREASED BARRIER DELINEATION	74
614	12380	14	17	31	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	73
614	12420			LS		DETOUR SIGNING	75
614	12484	2.64	3.36	6	EACH	WORK ZONE INCREASED PENALTIES SIGN	75
614	12500	22	28	50	EACH	REPLACEMENT SIGN	74
614	12600	132	168	300	EACH	REPLACEMENT DRUM	74
614	12801	443	563	1006	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	70
614	13310	350	446	796	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	74
614	13312	7	9	16	EACH	BARRIER REFLECTOR, TYPE 2, ONE-WAY	76
614	13350	356	454	810	EACH	OBJECT MARKER, ONE WAY	74 / 76
614	18000	66000	84000	150000	EACH	MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING	77
614	18030	440	560	1000	FT	MAINTAINING TRAFFIC, MISC.: CONSTRUCTION FENCE	77
614	18601	112	142	254	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	74
614	20011	0.96	1.23	2.19	MILE	WORK ZONE LANE LINE, CLASS I, 6" SPRAY THERMOPLASTIC, AS PER PLAN	74
614	20056	2.55	3.24	5.79	MILE	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	
614	21001	0.01	0.02	0.03	MILE	WORK ZONE CENTER LINE, CLASS I SPRAY THERMOPLASTIC, AS PER PLAN	74
614	21050	0.26	0.33	0.59	MILE	WORK ZONE CENTER LINE, CLASS I, 807 PAINT	
614	22010	0.29	0.37	0.66	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
614	22011	2.24	2.85	5.09	MILE	WORK ZONE EDGE LINE, CLASS I, 6" SPRAY THERMOPLASTIC, AS PER PLAN	74
614	22056	6.53	8.31	14.84	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	
614	23011	0.34	0.43		MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
614	23011	4319	5498	9817	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12" SPRAY THERMOPLASTIC, AS PER PLAN	74
614	23100	11612	14780	26392	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	
614	24001	93	119	212	FT	WORK ZONE DOTTED LINE, CLASS I SPRAY THERMOPLASTIC, AS PER PLAN	74
614	24100	3572	4546	8118	FT	WORK ZONE DOTTED LINE, CLASS I, 4", 807 PAINT	
614	24200	474	603	1077	FT	WORK ZONE DOTTED LINE, CLASS I, 642 PAINT	
614	25200	525	669	1194	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	
614	26200	27	34	61	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
614	30200	8	10	18	EACH	WORK ZONE ARROW, CLASS I, 642 PAINT	
614	40000	191	244	435	FT	LONGITUDINAL CHANNELIZER	76
615	10000			LS		ROADS FOR MAINTAINING TRAFFIC	
615	25000	2145	2729	4874	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
615	25001	44	56	100	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 1	77
615	25001	22	28	50	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 2	77
615	25001	9	11	20	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 3	77
615	25001	9	11	20	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 4	77
615	20001	2958	3765	6723	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	70
616	10000	601	764	1365	MGAL	WATER	74
622	41100	14102	17948	32050		PORTABLE BARRIER, UNANCHORED	
622	41110	97	123	220		PORTABLE BARRIER, ANCHORED	
622	41050	1	2	3	EACH	PORTABLE BARRIER, "Y" CONNECTOR	
808	18700	55	69	124	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	75
896	00010	82	104	186	SNMT	PORTABLE NON-INTRUSIVE TRAFFIC SENSOR, CLASS I	77
896	00021	27	35	62	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	77

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING SPLIT CHANGE	EMW	11-29-2021

CALCULATED EMW
CHECKED RMK

MAINTENANCE OF TRAFFIC GENERAL SUMMARY

FRA-70-12.68

SHEET NUMBER								PARTICIPATION						ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	69A	219	220		229	258		01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	04/MPO/ OT	05/NHS/ OT/COL	4						
																		ROADWAY	
	LS							LS	LS					201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN	53
		48626						25894	21417			1315		202	23000	48626	SY	PAVEMENT REMOVED	
		26655						24043				2612		202	30000	26655	SF	WALK REMOVED	
		4						4						202	30200	4	FT	STEPS REMOVED	
	270	1986						993	1263					202	30700	2256	FT	CONCRETE BARRIER REMOVED	
		4738						2085	2653					202	30800	4738	SY	TRAFFIC ISLAND REMOVED	
		16364						8742	6954			668		202	32000	16364	FT	CURB REMOVED	
		60						60						202	32500	60	FT	CURB AND GUTTER REMOVED	
		4265						1474	1876	915				202	35100	4265	FT	PIPE REMOVED, 24" AND UNDER	
		212						93	119					202	35200	212	FT	PIPE REMOVED, OVER 24"	
		6391						2812	3579					202	38000	6391	FT	GUARDRAIL REMOVED	
		22						7	9	6				202	58000	22	EACH	MANHOLE REMOVED	
		20						8	11			1		202	58100	20	EACH	CATCH BASIN REMOVED	
		31						14	16			1		202	58200	31	EACH	INLET REMOVED	
		2						1	1					202	58400	2	EACH	INLET ABANDONED	
		3						1	2					202	58401	3	EACH	INLET ABANDONED, AS PER PLAN	63
		3						1	2					202	58500	3	EACH	CATCH BASIN ABANDONED	
		1							1					202	58700	1	EACH	MANHOLE ABANDONED	
		2						1	1					202	58701	2	EACH	MANHOLE ABANDONED, AS PER PLAN "A"	63
		4						2	2					202	58701	4	EACH	MANHOLE ABANDONED, AS PER PLAN "B"	69
			5208					2105	2679			424		202	75000	5208	FT	FENCE REMOVED	
			1						1					202	75250	1	EACH	GATE REMOVED	
		6								6				202	75610	6	EACH	VALVE BOX REMOVED	
		1										1		202	98100	1	EACH	REMOVAL MISC.: BENCH REMOVED AND RESET	54
	4							4						202	98100	4	EACH	REMOVAL MISC.: TRASH RECEPTACLES	54
		4						4						202	98100	4	EACH	REMOVAL MISC.: BOLLARDS	
		2						2						202	98100	2	EACH	REMOVAL MISC.: ROCK ART MONOLITH	
		3						3						202	98100	3	EACH	REMOVAL MISC.: LIGHT POLE	
		2						2						202	98100	2	EACH	REMOVAL MISC.: WOOD POLE	
		359						359						202	98200	359	FT	REMOVAL MISC.: TRAFFIC BOLLARDS REMOVED	
		4262						194				4068		202	98400	4262 4	SF	REMOVAL MISC.: BRICK PAVERS REMOVED AND SALVAGED	54
				4	57771			25419	32352					203	10000	57771	CY	EXCAVATION	
					117794			51829	65965					203	20000	117794	CY	EMBANKMENT	
					44955			19780	25175					203	20001	44955	CY	EMBANKMENT, AS PER PLAN "A"	56
					87			38	49					203	20001	87	CY	EMBANKMENT, AS PER PLAN "B"	56
				4	38943			17135	21808					203	35000	38943	CY	GRANULAR EMBANKMENT	
	4				8473			3728	4745					203	35001	8473	CY	GRANULAR EMBANKMENT, AS PER PLAN	56
41538						10059		25419	23881		162	2135		204	10000	51597	SY	SUBGRADE COMPACTION	
					2086			918	1168					204	13000	2086	CY	EXCAVATION OF SUBGRADE	
					2086			918	1168					204	30010	2086	CY	GRANULAR MATERIAL, TYPE B	
38								15	20		1	2		204	45000	38	HOUR	PROOF ROLLING	
6644	2000					1831		7112	1120		162	2081		204	50000	10475	SY	GEOTEXTILE FABRIC	
6644								4401			162	2081		204	51000	6644	SY	GEOGRID	
65								31	34					206	10500	65	TON	CEMENT	
29187								13917	15270					206	11000	29187	SY	CURING COAT	
29187								13917	15270					206	15020	29187	SY	CEMENT STABILIZED SUBGRAGE, 14 INCHES DEEP	
	LS							LS	LS					208	14001	LS		VIBRATION CONTROL AND MONITORING, AS PER PLAN	66A
84								24	60					209	60201	84	STA	LINEAR GRADING, AS PER PLAN	57
			9463					4164	5299					606	15050	9463	FT	GUARDRAIL, TYPE MGS	
			5					2	3					606	26150	5	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	57
			4					2	2					606	26550	4	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
			19					8	11					606	35002	19	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
			10					4	6					606	35102	10	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
			1					1						606	60040	1	EACH	IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (50 MPH, 48" WIDTH)	57
			1						1					606	60040	1	EACH	IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (50 MPH, 90" WIDTH)	57
			2					1	1					606	60040	2	EACH	IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (60 MPH, 48" WIDTH)	57

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE / UPDATED EARTHWORK	CWL	11-29-2021

CALCULATED ATR
CHECKED CWL

GENERAL SUMMARY

FRA-70/71-12.68/14.86

211
1815

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11/28/2021
8:49:10 AM
QQQTV81STD_USER

SHEET NUMBER								PARTICIPATION						ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	69A		220					01/NHS/ PV	01/NHS/ PV	04/MPO/ OT	05/NHS/ OT/COL	06/ENH/ OT/COL	4						
																		ROADWAY (CONTINUED)	
	2000							880	1120					607	20001	2000	FT	FENCE, TYPE CL, AS PER PLAN	67
			481					212	269					607	23000	481	FT	FENCE, TYPE CLT	
			554					244	310					607	23001	554	FT	FENCE, TYPE CLT, AS PER PLAN "A"	53
			736					324	412					607	23001	736	FT	FENCE, TYPE CLT, AS PER PLAN "B"	58
			88					18	23		47			607	35000	88	FT	FENCE REMOVED AND REBUILT	
			739					325	414					607	39994	739	FT	TEMPORARY VANDAL FENCE, TYPE B	
			1						1					607	61201	1	EACH	GATE, TYPE CLT, AS PER PLAN "A"	53
			2					1	1					607	61201	2	EACH	GATE, TYPE CLT, AS PER PLAN "B"	58
			888					391	497					607	70000	888	FT	FENCELINE SEEDING AND MULCHING	
			20627					12922		189	7516			608	10000	20627	SF	4" CONCRETE WALK	
200			1646					1296	112	69	369			608	15000	1846	SF	8" CONCRETE WALK	
			14					14						608	41001	14	FT	CONCRETE STEPS, TYPE B, AS PER PLAN	57
5044											5044			608	98000	5044	SF	WALKWAY, MISC.: BRICK PAVER CROSSWALK	579
			2774							591		2183		608	98000	2774	SF	WALKWAY, MISC.: BRICK PAVER WALK	578
1752								771	981					608	98000	1752	SF	WALKWAY, MISC.: 6" X 6" CONCRETE PAVERS	582
41								18	23					608	98000	41	SF	WALKWAY, MISC.: COLUMBUS DETECTABLE WARNING, TYPE A	58
			16					16						608	98200	16	EACH	WALKWAY, MISC.: COLUMBUS CURB RAMP, TYPE A	57
			1					1						608	98200	1	EACH	WALKWAY, MISC.: COLUMBUS CURB RAMP, TYPE P-7	57
			1					1						608	98200	1	EACH	WALKWAY, MISC.: COLUMBUS CURB RAMP, TYPE P-4 MODIFIED	57
117								70	47					622	10060	117	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B	
80								48	32					622	10140	80	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	
1267								739	528					622	10160	1267	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
388								194	194					622	10161	388	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN	57
2								1	1					622	10200	2	EACH	BARRIER TRANSITION	644
11								5	6					622	25000	11	EACH	CONCRETE BARRIER END SECTION, TYPE D	
1									1					622	25001	1	EACH	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN "A"	57
1									1					622	25001	1	EACH	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN "B"	57
4								2	2					622	25004	4	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B	
2								1	1					622	25015	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN	58
25								13	12					622	25050	25	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
1									1					622	25051	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN	58
			1542					839	703					622	41101	1542	FT	PORTABLE BARRIER, UNANCHORED, AS PER PLAN	57
			1811					661	1150					622	41111	1811	FT	PORTABLE BARRIER, ANCHORED, AS PER PLAN	57
	240							106	134					622	90000	240	FT	BARRIER, MISC.: CONCRETE BARRIER, TYPE B	57
80								48	32					622	90000	80	FT	BARRIER, MISC.: CONCRETE BARRIER, TYPE B50	57
	LS							LS	LS					623	11000	LS		PROVIDING ELECTRONIC INSTRUMENTATION	58
	LS							LS	LS					SPECIAL	69098400	LS		SURVEY CONTROL VERIFICATION	54
LS								LS	LS					878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED ATR
CHECKED CWL

GENERAL SUMMARY

FRA-70/71-12.68/14.86

212
1815

SHEET NUMBER								PARTICIPATION											SEE SHEET NO.
OFFICE CALCS	69A		221		229			01/NHS/ PV	01/NHS/ PV					ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	
																		EROSION CONTROL	
315								139	176					601	12001	315	SY	RIPRAP, WITH GROUT, AS PER PLAN	582
			1127					496	631					601	21000	1127	SY	CONCRETE SLOPE PROTECTION	
	8		223					102	129					601	21050	231	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
			243					107	136					601	21060	243	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	
			6					3	3					601	32200	6	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
			571					251	320					601	37501	571	FT	PAVED GUTTER, TYPE 1-2, AS PER PLAN	65
					2			1	1					659	00100	2	EACH	SOIL ANALYSIS TEST	
					6130			2697	3433					659	00300	6130	CY	TOPSOIL	
					55225			24299	30926	4				659	10000	55225	SY	SEEDING AND MULCHING	
					2761			1215	1546					659	14000	2761	SY	REPAIR SEEDING AND MULCHING	
					2761			1215	1546					659	15000	2761	SY	INTER-SEEDING	
					7.70			3.39	4.31					659	20000	7.70	TON	COMMERCIAL FERTILIZER	
					11.41			5.02	6.39					659	31000	11.41	ACRE	LIME	
					306			135	171					659	35000	306	MGAL	WATER	
																4			
			95					42	53					660	30000	95	SY	SODDING UNSTAKED	
			2313					1018	1295					670	00700	2313	SY	DITCH EROSION PROTECTION	
			LS					LS	LS					832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
			LS					LS	LS					832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
			LS					LS	LS					832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
			1150000					506000	644000					832	30000	1150000	EACH	EROSION CONTROL	
																		ENVIRONMENTAL / REMEDIATION	
	1000							440	560					SPECIAL	69065000	1000	TON	WORK INVOLVING NON-REGULATED MATERIALS	66A
	100							44	56					SPECIAL	69065002	100	TON	WORK INVOLVING HAZARDOUS WASTE	66A
	500							220	280					SPECIAL	69065010	500	TON	WORK INVOLVING SOLID WASTE	66A
	11000							4840	6160					SPECIAL	69065022	11000	GAL	WORK INVOLVING NON-REGULATED WATER	66A
1	11000							4840	6160					SPECIAL	69065024	11000	GAL	WORK INVOLVING REGULATED WATER	66A

NO.	DESCRIPTION	REV. BY	DATE
1	ADDED LIBERTY RMP NOTE	CWL	11-4-2021
4	FUNDING CODE CHANGE / UPDATED EARTHWORK	CWL	11-29-2021

CALCULATED ATR
CHECKED CWL

GENERAL SUMMARY

FRA-70/71-12.68/14.86

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SHEET NUMBER								PARTICIPATION 4					ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	69A		222	223				01/NHS/ PV	01/NHS/ PV		05/NHS/ OT/COL							
																	DRAINAGE	
			2.0					0.9	1.1				602	20000	2.0	CY	CONCRETE MASONRY	
			52					43			9		605	05200	52	FT	4" UNCLASSIFIED PIPE UNDERDRAINS	
			1995					1684			311		605	06000	1995	FT	4" BASE PIPE UNDERDRAINS	
			13967					6146	7821				605	11110	13967	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
			12								12		605	13300	12	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
	200		1184					611	773				605	13410	1384	FT	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
			345								345		605	14000	345	FT	6" BASE PIPE UNDERDRAINS	
			25281					11136	14145				605	14020	25281	FT	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
			22					22					611	00100	22	FT	4" CONDUIT, TYPE B	
			183					163			20		611	00410	183	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	
			645					285	360				611	00510	645	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
	50		675					319	406				611	00900	725	FT	6" CONDUIT, TYPE B	
	50							22	28				611	01100	50	FT	6" CONDUIT, TYPE C	
	50							22	28				611	01400	50	FT	6" CONDUIT, TYPE E	
	250							110	140				611	01500	250	FT	6" CONDUIT, TYPE F	
			87					38	49				611	04400	87	FT	12" CONDUIT, TYPE B	
			16					7	9				611	04400	16	FT	12" CONDUIT, TYPE B, 706.02	
			100					44	56				611	04600	100	FT	12" CONDUIT, TYPE C	
			2322					1022	1300				611	05900	2322	FT	15" CONDUIT, TYPE B	
			34					15	19				611	05900	34	FT	15" CONDUIT, TYPE B,706.02	
			639					281	358				611	05900	639	FT	15" CONDUIT, TYPE B, 706.02 WITH 706.11 JOINTS	
			601					264	337				611	05901	601	FT	15" CONDUIT, TYPE B, AS PER PLAN	64
			1760					775	985				611	06100	1760	FT	15" CONDUIT, TYPE C	
			284					125	159				611	06100	284	FT	15" CONDUIT, TYPE C, 706.02 WITH 706.11 JOINTS	
			37					17	20				611	06101	37	FT	15" CONDUIT, TYPE C, AS PER PLAN	64
			992					437	555				611	07400	992	FT	18" CONDUIT, TYPE B	
			12					5	7				611	07401	12	FT	18" CONDUIT, TYPE B, AS PER PLAN, 748.01, CLASS 52	64
			261					115	146				611	07600	261	FT	18" CONDUIT, TYPE C	
			28					12	16				611	07601	28	FT	18" CONDUIT, TYPE C, AS PER PLAN	64
			76					33	43				611	08900	76	FT	21" CONDUIT, TYPE B	
			101					44	57				611	08900	101	FT	21" CONDUIT, TYPE B, 706.02 WITH 706.11 JOINTS	
			249					110	139				611	09100	249	FT	21" CONDUIT, TYPE C	
			335					148	187				611	10400	335	FT	24" CONDUIT, TYPE B	
			10					4	6				611	10401	10	FT	24" CONDUIT, TYPE B, AS PER PLAN	64
			312					138	174				611	10600	312	FT	24" CONDUIT, TYPE C	
			130					57	73				611	11900	130	FT	27" CONDUIT, TYPE B	
			709					312	397				611	12100	709	FT	27" CONDUIT, TYPE C	
			531					233	298				611	13600	531	FT	30" CONDUIT, TYPE C	
			126					55	71				611	16400	126	FT	36" CONDUIT, TYPE B	
			20					8	12				611	16400	20	FT	36" CONDUIT, TYPE B, 706.02	
			126					55	71				611	96600	126	FT	CONDUIT, BORED OR JACKED, 42" TYPE B, 748.06	63
			292					128	164				611	96601	292	FT	CONDUIT, BORED OR JACKED, AS PER PLAN, 42" CONDUIT, TYPE C, 748.06 (0.625" WALL THICKNESS)	63
	60							26	34				611	97200	60	EACH	CONDUIT, MISC.: INTERNAL JOINT SEAL	63
				12				5	7				611	98150	12	EACH	CATCH BASIN, NO. 3	
				15				7	8				611	98180	15	EACH	CATCH BASIN, NO. 3A	
				4				1	3				611	98370	4	EACH	CATCH BASIN, NO. 6	
				2				1	1				611	98371	2	EACH	CATCH BASIN, NO. 6, AS PER PLAN	64
				2				1	1				611	98390	2	EACH	CATCH BASIN, NO. 7	
				10				4	6				611	98410	10	EACH	CATCH BASIN, NO. 8	
				4				1	3				611	98411	4	EACH	CATCH BASIN, NO. 8, AS PER PLAN	64
				9				3	6				611	98470	9	EACH	CATCH BASIN, NO. 2-2B	
				1					1				611	98510	1	EACH	CATCH BASIN, NO. 2-3	
				1					1				611	98631	1	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	63 , 64

NO.	DESCRIPTION	REV. BY	DATE
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CALCULATED ATR
CHECKED CWL

GENERAL SUMMARY

FRA-70/ 71-12.68/ 14.86

SHEET NUMBER								PARTICIPATION 4							ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	69A		223					01/NHS/ PV	01/NHS/ PV		05/NHS/ OT/COL									
																			DRAINAGE (CONTINUED)	
			1						1						611	99111	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN	64
			10					4	6						611	99114	10	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	
			8					4	4						611	99115	8	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN	64
			2					1	1						611	99151	2	EACH	INLET ADJUSTED TO GRADE, AS PER PLAN	63 , 64
			26					12	14						611	99574	26	EACH	MANHOLE, NO. 3	
			10					4	6						611	99575	10	EACH	MANHOLE, NO. 3, AS PER PLAN	64
			4					1	2		1				611	99655	4	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	63 , 64
	4		4					4	4						611	99710	8	EACH	PRECAST REINFORCED CONCRETE OUTLET	
	1000							440	560						SPECIAL	61199820	1000	LB	MISCELLANEOUS METAL	63
			1						1						611	99900	1	EACH	DRAINAGE STRUCTURE, MISC.: GATEWELL RECONSTRUCTED TO GRADE	669A
			8					3	3		2				SPECIAL	69098000	8	EACH	CITY OF COLUMBUS STANDARD CURB AND GUTTER INLET (AA-S125A WITH GRATE AA-S128)	63 , 64
			1								1				SPECIAL	69098000	1	EACH	CITY OF COLUMBUS RECTANGULAR CATCH BASIN (AA-S135 WITH GRATE AA-S140)	63 , 64
			4					2	2						SPECIAL	69098000	4	EACH	CITY OF COLUMBUS STANDARD CATCH BASIN (AA-S133A WITH GRATE AA-S141)	63 , 64
			9					3	5		1				SPECIAL	69098000	9	EACH	CITY OF COLUMBUS MANHOLE, TYPE C (AA-S102)	63 , 64
			99					44	55						SPECIAL	69098100	99	FT	CITY OF COLUMBUS 6" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL	63
			73					32	41						SPECIAL	69098100	73	FT	CITY OF COLUMBUS 8" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL	63
			638					217	278		143				SPECIAL	69098100	638	FT	CITY OF COLUMBUS 12" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL	63
			162					71	91						SPECIAL	69098100	162	FT	CITY OF COLUMBUS 12" PIPE, 706.02 WITH 706.11 JOINTS, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL	63
			56					25	31						SPECIAL	69098100	56	FT	CITY OF COLUMBUS 15" PIPE, 706.02 WITH 706.11 JOINTS, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL	63
			369					162	207						837	10000	369	FT	LINER PIPE, 27" I.D., 707.12	

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4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED ATR
CHECKED CWL

GENERAL SUMMARY

FRA-70/71-12.68/14.86

215
1815

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SHEET NUMBER								PARTICIPATION						ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	69A		224	225A		258		01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	04/MPO/ OT	05/NHS/ OT/COL	06/ENH/ OT/COL						
																		PAVEMENT	
	500							500						251	01020	500	SY	PARTIAL DEPTH PAVEMENT REPAIR (442)	55
3595								3595						254	01000	3595	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.25" AVG DEPTH	
1435								861	574					254	01000	1435	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 5" AVG DEPTH	
				181								181		255	10110	181	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC FS	55
				840								840		255	20000	840	FT	FULL DEPTH PAVEMENT SAWING	
16734								6472	10262					302	46000	16734	CY	ASPHALT CONCRETE BASE, PG64-22	
12790	4					2016		6243	8172		27	364		304	20000	14806	CY	AGGREGATE BASE	
									4							4			
						534		521				13		305	11010	534	SY	7" CONCRETE BASE, CLASS QC 1P	
5333								3624			162	1547		305	13010	5333	SY	9" CONCRETE BASE, CLASS QC 1P	
374						38		291	4		12	109		407	13900	412	GAL	TACK COAT, 702.13	
10435	4					30		4381	5989		9	86		407	20000	10465	GAL	NON-TRACKING TACK COAT	
																4			
313						23		275	4		6	55		441	50101	336 4	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG64-22	55
377	4					27		256	64		8	76		441	50300	404	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
241								68	173					441	50701	241	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN	57
2927								1103	1824					442	00100	2927	CY	ANTI-SEGREGATION EQUIPMENT	55
1627								828	799					442	10001	1627	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (446), AS PER PLAN	55
1026								151	875					442	10001	1026	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (446), AS PER PLAN, PG76-22M	55
2836								1110	1726					442	10100	2836	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
99								99						SPECIAL	45130000	99	FT	PRESSURE RELIEF JOINT, TYPE A	581
341								150	191					452	09010	341	SY	4" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
						461		420				41		452	12050	461	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	
631								631						452	15010	631	SY	12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
4014						164		2105	2073					609	24510	4178	FT	CURB, TYPE 4-C	
271									271					609	26000	271	FT	CURB, TYPE 6	
2010								1280	730					609	50000	2010	SY	4" CONCRETE TRAFFIC ISLAND	
99								99						609	98000	99	FT	CURB, MISC.: COMBINATION CURB AND GUTTER, TYPE SPECIAL	55
1611						333		1141				803		609	98000	1944	FT	CURB, MISC.: COLUMBUS 18" CONCRETE CURB	55
1040						32							1072	609	98000	1072	FT	CURB, MISC.: COLUMBUS 18" GRANITE CURB	55
0.53								0.29	0.24					618	40600	0.53	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
	412							368				44		SPECIAL	69098100	412	FT	SAWING AND SEALING CONCRETE JOINTS	61
	231							102	129					SPECIAL	69098300	231	SY	PAVEMENT OVERLAY FABRIC	55
82	4						4	36	46					823	10000	82 4	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448)	
30428								10369	20059					872	10000	30428	FT	VOID REDUCING ASPHALT MEMBRANE (VRAM)	
																		WATER WORK	
			1							1				611	99655	1	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	68 , 68A
			2							1		1		638	10400	2	EACH	FIRE HYDRANT ADJUSTED TO GRADE	
			304							304				SPECIAL	63811602	304	FT	6" WATER MAIN DIP AND FITTINGS (COLUMBUS 801)	68
			62							62				SPECIAL	63811604	62	FT	8" WATER MAIN DIP AND FITTINGS (COLUMBUS 801)	68
			611							611				SPECIAL	63811608	611	FT	12" WATER MAIN DIP AND FITTINGS (COLUMBUS 801)	68
			4							4				SPECIAL	63811614	4	FT	20" WATER MAIN DIP AND FITTINGS (COLUMBUS 801)	68
			29							20		9		SPECIAL	63820500	29	EACH	VALVE BOX ADJUSTED TO GRADE (COLUMBUS 807)	68 , 68A
			2							2				SPECIAL	63820538	2	EACH	6" GATE VALVE WITH VALVE BOX (COLUMBUS 802)	68 , 68A
			1							1				SPECIAL	63820554	1	EACH	8" GATE VALVE WITH VALVE BOX (COLUMBUS 802)	68 , 68A
			2							2				SPECIAL	63820586	2	EACH	12" GATE VALVE WITH VALVE BOX (COLUMBUS 802)	68 , 68A
			1							1				SPECIAL	63820666	1	EACH	20" BUTTERFLY VALVE WITH VALVE BOX (COLUMBUS 802)	68 , 68A
			4							4				SPECIAL	63820750	4	EACH	6" FIRE HYDRANT (COLUMBUS 809)	68
			5							5				SPECIAL	63820758	5	EACH	FIRE HYDRANT ABANDONED (COLUMBUS 809)	68
			2							2				SPECIAL	63820878	2	EACH	CUT AND PLUG EXISTING 6" WATER LINE (COLUMBUS 808)	68
			4							4				SPECIAL	63820880	4	EACH	CUT AND PLUG EXISTING 8" WATER LINE (COLUMBUS 808)	68
			1							1				SPECIAL	63820882	1	EACH	CUT AND PLUG EXISTING 10" WATER LINE (COLUMBUS 808)	68
			2							2				SPECIAL	63820884	2	EACH	CUT AND PLUG EXISTING 12" WATER LINE (COLUMBUS 808)	68
			1							1				SPECIAL	63820888	1	EACH	CUT AND PLUG EXISTING 20" WATER LINE (COLUMBUS 808)	68
			2							2				638	98000	2	EACH	WATER WORK, MISC.: 1.5" CURB STOP (COLUMBUS 805)	68
			2							2				638	98000	2	EACH	WATER WORK, MISC.: 1.5" WATER TAP (COLUMBUS 805)	68
			1							1				638	98000	1	EACH	WATER WORK, MISC.: 20" x6" TAPPING SLEEVE AND VALVE AND APPURTENANCES (COLUMBUS 803)	68

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE / WIDENED BFD	CWL	11-29-2021

CALCULATED ATR
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GENERAL SUMMARY

FRA-70/71-12.68/14.86

SHEET NUMBER								PARTICIPATION				ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	69A		224	225				01/NHS/ PV		05/NHS/ OT/COL							
																WATER WORK (CONTINUED)	
			1					1				638	98000	1	EACH	WATER WORK, MISC.: 24" x 6" TAPPING SLEEVE AND VALVE AND APPURTENANCES (COLUMBUS 803)	68 , 68A
			1					1				638	98000	1	EACH	WATER WORK, MISC.: FIRE HYDRANT, RELOCATED (COLUMBUS 809)	68
			1					1				638	98000	1	EACH	WATER WORK, MISC.: 3" WATER SERVICE LINE TRANSFER (COLUMBUS 805)	68
			1					1				638	98000	1	EACH	WATER WORK, MISC.: 6" WATER SERVICE LINE TRANSFER (COLUMBUS 805)	68
			2					2				638	98000	2	EACH	WATER WORK, MISC.: 6" WATER MAIN ABANDONED (COLUMBUS 808)	68
			2					2				638	98000	2	EACH	WATER WORK, MISC.: 8" WATER MAIN ABANDONED (COLUMBUS 808)	68
			1					1				638	98000	1	EACH	WATER WORK, MISC.: 20" WATER MAIN ABANDONED (COLUMBUS 808)	68
	LS							LS				638	98100	LS		WATER WORK, MISC.: SURVEY COORDINATES	68
			40					40				SPECIAL	69098700	40	CY	INCREASE OR DECREASE IN EXCAVATION AND BACKFILL (COLUMBUS 811)	68
			500					500				SPECIAL	69099400	500	LB	DUCTILE IRON FITTINGS, INCREASE OR DECREASE (COLUMBUS 801)	68
																SANITARY SEWER	
	LS							LS				611	97300	LS		CONDUIT, MISC.: BYPASS PUMPING FOR VIDEO INSPECTION AND PIPE REPAIRS 3	69
	3300							3300				611	97400	3300	FT	CONDUIT, MISC.: SEWER VIDEO INSPECTION	69
			2					2				611	99655	2	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	68A , 69
			3					3				SPECIAL	69098000	3	EACH	CITY OF COLUMBUS MANHOLE, TYPE C (AA-S102)	69
			1					1				SPECIAL	69098000	1	EACH	CITY OF COLUMBUS MANHOLE, TYPE C, AS PER PLAN (AA-S102)	69
			204					204				SPECIAL	69098100	204	FT	CITY OF COLUMBUS 18" CONDUIT, C905 PIPE, WITH TYPE 1 BEDDING, WITH ITEM 912 COMPACTED	69
																GRANULAR MATERIAL	
																LIGHTING	
																FOR LIGHTING GENERAL SUMMARY	1164,1164A
																ELECTRICAL	
				110				110				SPECIAL	69098000	110	EACH	BORE SPACERS FOR 6" SCH 40 PVC CONDUIT	921
				2						2		SPECIAL	69098000	2	EACH	75kVA LOOP FEED SINGLE PHASE PADMOUNT TRANSFORMER (TDMIS-1201)	922A
				1						1		SPECIAL	69098000	1	EACH	300kVA LOOP FEED THREE PHASE PADMOUNT TRANSFORMER, 14.4 kV, DELTA/208/120 (TDMIS-1202)	922A
				1						1		SPECIAL	69098000	1	EACH	750kVA LOOP FEED THREE PHASE PADMOUNT TRANSFORMER, 14.4kV, DELTA/480/277 (TDMIS-1202)	922A
				2						2		SPECIAL	69098000	2	EACH	FIBERGLASS FLAT PAD FOR SINGLE PHASE TRANSFORMERS (TDMIS-1009)	922A
				4						4		SPECIAL	69098000	4	EACH	HANDHOLE	922A
				1				1				SPECIAL	69098000	1	EACH	50'/2 WOOD POLE	921
				1				1				SPECIAL	69098000	1	EACH	THREE PHASE DEADEND ATTACHMENTS (TDMIS-406)	921
				1				1				SPECIAL	69098000	1	EACH	WOOD CROSSARM (TDMIS-10)	921
				2				2				SPECIAL	69098000	2	EACH	PRIMARY DOWN GUY (TDMIS-100)	921
				1				1				SPECIAL	69098000	1	EACH	DISTRIBUTION POLE GROUND (TDMIS-7)	921
				7						7		SPECIAL	69098000	7	EACH	SUBMERSIBLE SEPARABLE CONNECTOR	922A
				1				1				SPECIAL	69098000	1	EACH	DISTRIBUTION RISER (TDMIS-1001)	921
				9				4		5		SPECIAL	69098000	9	EACH	DOP MANHOLE (TDMIS-1015)	921
				2				2				SPECIAL	69098000	2	EACH	4'x 4' x 4' PULLBOX	921
				65				65				SPECIAL	69098000	65	EACH	BRIDGE MOUNTED CONDUIT HANGER	921
				1				1				SPECIAL	69098000	1	EACH	CABLE TRAY RISER	921
				12				12				SPECIAL	69098000	12	EACH	11.25° SCH 40 PVC CONDUIT SWEEP	921
				6				6				SPECIAL	69098000	6	EACH	22.5° SCH 40 PVC CONDUIT SWEEP	921
				6				6				SPECIAL	69098000	6	EACH	FIBERGLASS TO PVC CONDUIT COUPLER	921
				12						12		SPECIAL	69098000	12	EACH	WOOD POLE, REMOVAL (TDMIS-1600)	921
				11						11		SPECIAL	69098000	11	EACH	OVERHEAD TRANSFORMER, REMOVAL (TDMIS-1600)	922A
				11				11				SPECIAL	69098000	11	EACH	6" FIBERGLASS CONDUIT EXPANSION FITTINGS	922A
				4				4				SPECIAL	69098000	4	EACH	ADJUSTING EXISTING GRADE	921
				12				12				SPECIAL	69098000	12	EACH	5" FIBERGLASS 90° SWEEP	921
				1				1				SPECIAL	69098000	1	EACH	EXISTING MANHOLE REMOVAL	921
				12						12		SPECIAL	69098000	12	EACH	MEDIUM VOLTAGE CABLE ACCEPTANCE TESTING	922A
				2				2				SPECIAL	69098000	2	EACH	PADMOUNT TRANSFORMER RELOCATION	921
				1						1		SPECIAL	69098000	1	EACH	PADMOUNT SF6 SWITCHGEAR	922A
				3453				2208		1245		SPECIAL	69098100	3453	FT	(3) - 750kCMIL Cu, 15kV, XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)-350kCMIL Cu, 600V NEUTRAL	921
				1407				1407				SPECIAL	69098100	1407	FT	(3) - 350kCMIL Cu, 15kV, XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)-4/0 Cu, 600V NEUTRAL	921
				282						282		SPECIAL	69098100	282	FT	(1) - 250kCMIL Cu, 15kV, XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)-1/0 Cu, 600V NEUTRAL	921
				427						427		SPECIAL	69098100	427	FT	2x1 CONCRETE DUCT BANK - 5" PVC (TDMIS-3000)	922A
				721						721		SPECIAL	69098100	721	FT	2x2 CONCRETE DUCT BANK - 5" PVC (TDMIS-3000) 2	922A
				238				238				SPECIAL	69098100	238	FT	2x3 CONCRETE DUCT BANK - 6" PVC (TDMIS-3000)	921
				671				196		475		SPECIAL	69098100	671	FT	3x3 CONCRETE DUCT BANK - 5" PVC (TDMIS-3000)	921
				7400						7400		SPECIAL	69098100	7400	FT	WIRE AND CABLE REMOVAL (TDMIS-1600)	922A
				84				84				SPECIAL	69098100	84	FT	5" SCH 40 PVC CONDUIT	921
				5254				5254				SPECIAL	69098100	5254	FT	6" SCH 40 PVC CONDUIT	921
				551				551				SPECIAL	69098100	551	FT	30" DIRECTIONAL BORE AND PIPE, 748.06	921
				125						125		SPECIAL	69098100	125	FT	(2) - #2 Al, 15kV XLP, 133% INS JCN	922A
				777				777				SPECIAL	69098100	777	FT	5" XHW FIBERGLASS CONDUIT	921
				6210				6210				SPECIAL	69098100	6210	FT	6" XHW FIBERGLASS CONDUIT	921
				347				347				SPECIAL	69098100	347	FT	4" SCH 40 PVC CONDUIT	921
				420				420				SPECIAL	69098100	420	FT	(3)-#1 AL, 15kV, XLP WITH (1)-#2 AL, 600V NEUTRAL	921
				1317						1317		SPECIAL	69098100	1317	FT	(3)-#1 Cu, 15kV, XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)-#1 Cu, 600V NEUTRAL	922A
				1245						1245		SPECIAL	69098100	1245	FT	(3)-500kCMIL Cu, 15kV, XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)-350kCMIL Cu, 600V NEUTRAL	922A

NO.	DESCRIPTION	REV. BY	DATE
2	DOP TDMIS CHANGE	CWL	11-12-2021
3	UPDATED BYPASS NOTE	CWL	11-19-2021
4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED ATR
CHECKED CWL

GENERAL SUMMARY

FRA-70/ 71-12.68/ 14.86

SHEET NUMBER				PARTICIPATION												ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
69B		225A		01/NHS/ PV	01/NHS/ PV	02/NHS/ BR	03/NHS/ BR					04/MPO/ OT	05/NHS/ OT/COL	06/ENH/ OT/COL	07/NHS/ OT/AEP						
																				OTHER UTILITIES	
		2											2			SPECIAL	69098000	2	EACH	PRIVATE TELECOM MANHOLE, AS PER PLAN	938C
		4											4			SPECIAL	69098000	4	EACH	4" CONDUIT RISER	938B
		204											204			SPECIAL	69098100	204	FT	CONDUIT ENCASED, 1 - 4"	938B
		122											122			SPECIAL	69098100	122	FT	CONDUIT ENCASED, 2 - 4"	938B
		26											26			SPECIAL	69098100	26	FT	CONDUIT ENCASED, 6 - 4"	938B
		1117											1117			SPECIAL	69098100	1117	FT	CONDUIT ENCASED, 8 - 4"	938B
																				TRAFFIC SURVEILLANCE	
																				FOR TRAFFIC SURVEILLANCE GENERAL SUMMARY	1122
																				TRAFFIC CONTROL	
																				FOR TRAFFIC CONTROL GENERAL SUMMARY	961,962
																				TRAFFIC SIGNALS	
																				FOR TRAFFIC SIGNALS GENERAL SUMMARY	1097
																				LANDSCAPING	
5				2	3											661	40081	5	EACH	DECIDUOUS TREE, 2" CALIPER, AS PER PLAN, CERCIS CANADENSIS - RED BUD	66
8				4	4											661	40101	8	EACH	DECIDUOUS TREE, 2-1/2" CALIPER, AS PER PLAN, CELTIS OCCIDENTALIS - HACKBERRY	66
12				5	7											661	40101	12	EACH	DECIDUOUS TREE, 2-1/2" CALIPER, AS PER PLAN, PLATANUS OCCIDENTALIS - SYCAMORE	66
5				2	3											661	40101	5	EACH	DECIDUOUS TREE, 2-1/2" CALIPER, AS PER PLAN, QUERCUS BICOLOR - SWAMP WHITE OAK	66
20				9	11											661	99900	20	EACH	PLANTING, MISC.: DECIDUOUS SHRUB, 24" - 36" HEIGHT, VIBURNUM DENTATUM - ARROWWOOD	66
20				9	11											661	99900	20	EACH	PLANTING, MISC.: DECIDUOUS SHRUB, 24" - 36" HEIGHT, PHYSOCARPUS OPULIFOLIUS - NINEBARK	66
																				FOR LANDSCAPING GENERAL SUMMARY	1207
																				RETAINING WALLS	
																				FOR FLOODWALL GENERAL SUMMARY	694
																				FOR RETAINING WALL 4W1 GENERAL SUMMARY	712
																				FOR RETAINING WALL 4W2 GENERAL SUMMARY	731
																				FOR RETAINING WALL 4W4 GENERAL SUMMARY	756
																				FOR RETAINING WALL 4W5 GENERAL SUMMARY	764
																				FOR RETAINING WALL 4W6 GENERAL SUMMARY	764
																				FOR RETAINING WALL 4W7 GENERAL SUMMARY	790
																				FOR RETAINING WALL 4W8 GENERAL SUMMARY	804
																				FOR RETAINING WALL 4W9 GENERAL SUMMARY	824
																				FOR RETAINING WALL 4W10 GENERAL SUMMARY	831
																				FOR RETAINING WALL 4W11 GENERAL SUMMARY	835
																				FOR RETAINING WALL 4W12 GENERAL SUMMARY	845
																				FOR RETAINING WALL 4W20 GENERAL SUMMARY	883
																				FOR RETAINING WALL 4W21A, 4W21B, 4W21C GENERAL SUMMARY	888A
																				FOR TEMPORARY SHORING AND WALL GENERAL SUMMARY	889
																				STRUCTURE OVER 20 FOOT SPAN	
																				FOR FRA-70-1282R GENERAL SUMMARY	1232
																				FOR FRA-70-1301A GENERAL SUMMARY	1277
																				FOR FRA-71-1518A GENERAL SUMMARY	1336
																				FOR FRA-70-1321A GENERAL SUMMARY	1375
																				FOR FRA-70-1343 GENERAL SUMMARY	1462A
																				FOR FRA-70-1357A GENERAL SUMMARY	1463
																				FOR FRA-70-1358A GENERAL SUMMARY	1476
																				FOR FRA-70-1373R GENERAL SUMMARY	1511
																				FOR FRA-70-1373A GENERAL SUMMARY	1542
																				FOR FRA-70-1390C GENERAL SUMMARY	1571
																				FOR FRA-70-1395C GENERAL SUMMARY	1687
																				FOR FRA-70-1395C AESTHETIC ENHANCEMENT GENERAL SUMMARY	1748
																				MAINTENANCE OF TRAFFIC	
																				FOR MAINTENANCE OF TRAFFIC GENERAL SUMMARY	80
																			3		
																				INCIDENTALS	
				LS	LS											100	50100	LS	180000	DEPARTMENT'S SHARE OF THE DISPUTE RESOLUTION BOARD	
				LS	LS											108	10000	LS		CPM PROGRESS SCHEDULE	
				LS	LS											SPECIAL	11110000	LS	15250	DEPARTMENTS SHARE FACILITATED PARTNERING COSTS	
				LS	LS											614	11000	LS		MAINTAINING TRAFFIC	
				LS	LS											623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
				LS	LS											624	10000	LS		MOBILIZATION	

NO.	DESCRIPTION	REV. BY	DATE
3	UPDATED ITEM 100 AND 111	CWL	11-19-2021
4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED ATR
CHECKED CWL

GENERAL SUMMARY

FRA-70/71-12.68/14.86

SHEET NO.	202 PAVEMENT REMOVED SY			202 PAVEMENT REMOVED, ASPHALT SY			202 WALK REMOVED SF			202 STEPS REMOVED FT	202 CONCRETE BARRIER REMOVED FT		202 TRAFFIC ISLAND REMOVED SY			202 CURB REMOVED FT			202 CURB AND GUTTER REMOVED SY	202 GUARDRAIL REMOVED FT			202 PIPE REMOVED, 24" AND UNDER FT			202 PIPE REMOVED, OVER 24" FT			202 REMOVAL MISC.: WOOD POLE EACH
	01/NHS/ PV	01/NHS/ PV	05/NHS/ OT/COL	01/NHS/ PV	01/NHS/ PV	05/NHS/ OT/COL	01/NHS/ PV	05/NHS/ OT/COL		01/NHS/ PV	01/NHS/ PV	01/NHS/PV	01/NHS/ PV	01/NHS/PV		01/NHS/ PV	01/NHS/PV	05/NHS/ OT/COL	01/NHS/ PV	01/NHS/ PV	01/NHS/PV		01/NHS/ PV	01/NHS/PV	01/NHS/PV	01/NHS/ PV	01/NHS/PV		01/NHS/ PV
242																				2812	3579									
246																							440	559		93	119			
247																							1034	1317					2	
248																									121					
254																									794					
256	4850	5604	62	3781	4261	19	671				122	155	15	19		2995	3760	83	60											
257	5672	7145		11591	4407	1234	23372	2612		4	752	957	2070	2634		5747	3194	585												
TOTALS CARRIED TO GENERAL SUMMARY	10522	12749	62	15372	8668	1253	24043	2612		4	874	1112	2085	2653		8742	6954	668	60	2812	3579		1474	1876	915	93	119		2	

SHEET NO.	202 MANHOLE REMOVED EACH			202 CATCH BASIN REMOVED EACH			202 INLET REMOVED EACH			202 CATCH BASIN ABANDONED EACH		202 INLET ABANDONED EACH		202 INLET ABANDONED, AS PER PLAN EACH			202 MANHOLE ABANDONED EACH		202 MANHOLE ABANDONED, AS PER PLAN "A" EACH		202 MANHOLE ABANDONED, AS PER PLAN "B" EACH		202 VALVE BOX REMOVED EACH	202 REMOVAL MISC.: BENCH REMOVED AND RESET EACH	202 REMOVAL MISC.: TRAFFIC BOLLARDS REMOVED FT	202 REMOVAL MISC.: BOLLARDS EACH	202 REMOVAL MISC.: ROCK ART MONOLITH EACH	202 REMOVAL MISC.: BRICK PAVERS REMOVED AND SALVAGED SF		202 REMOVAL MISC.: LIGHT POLE EACH
	01/NHS/ PV	01/NHS/PV	01/NHS/PV	01/NHS/ PV	01/NHS/PV	05/NHS/ OT/COL	01/NHS/ PV	01/NHS/PV	05/NHS/ OT/COL	01/NHS/ PV	01/NHS/PV	01/NHS/ PV	01/NHS/PV	01/NHS/ PV	01/NHS/PV		01/NHS/PV	01/NHS/ PV	01/NHS/PV	01/NHS/ PV	01/NHS/PV		01/NHS/PV	05/NHS/ OT/COL	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV		01/NHS/ PV	05/NHS/ OT/COL	01/NHS/ PV
230										1	2	1	1	1	2		1	1	1	2	2									
234	3	3		5	7		7	8																						
235	4	6		3	4	1	7	8	1																					
247																							1		4	2				3
248			6																											
254																							4							
255																							2							
257																								359				194	4068	
TOTALS CARRIED TO GENERAL SUMMARY	7	9	6	8	11	1	14	16	1	1	2	1	1	1	2		1	1	1	2	2	6	1	359	4	2	194	4068	3	

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED CJC
CHECKED CWL

ROADWAY SUBSUMMARY

FRA-70/71-12.68/14.86

CALCULATED CJC | CHECKED CWL

ROADWAY SUBSUMMARY

FRA-70/71-12.68/14.86

SHEET NO.	606 IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (50 MPH, 48" WIDTH) EACH		606 IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (50 MPH, 90" WIDTH) EACH		202 FENCE REMOVED FT			202 GATE REMOVED EACH		607 TEMPORARY VANDAL FENCE, TYPE B FT		606 GUARDRAIL, TYPE MGS FT		606 ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016) EACH		606 ANCHOR ASSEMBLY, MGS TYPE T EACH		606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH		606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH		606 IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (60 MPH, 48" WIDTH) EACH			607 FENCE REMOVED AND REBUILT FT			607 FENCE, TYPE CLT FT		607 FENCE, TYPE CLT, AS PER PLAN "A" FT		607 FENCE, TYPE CLT, AS PER PLAN "B" FT	
	01/NHS/ PV		01/NHS/ PV		01/NHS/ PV	01/NHS/ PV	05/NHS/ OT/COL		01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV		01/NHS/ PV	01/NHS/ PV	05/NHS/ OT/COL	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV
230																					1	1												
240			2105	2679	424		1	325	414															18	23	47	212	269	244	310	324	412
241	1	1								4164	5299	2	3	2	2	8	11	4	6														
TOTALS CARRIED TO GENERAL SUMMARY	1	1	2105	2679	424		1	325	414	4164	5299	2	3	2	2	8	11	4	6	1	1		18	23	47	212	269	244	310	324	412

SHEET NO.	607 GATE, TYPE CLT, AS PER PLAN "A" EACH		607 FENCELINE SEEDING AND MULCHING FT		608 4" CONCRETE WALK SF			608 8" CONCRETE WALK SF			608 WALKWAY, MISC.: COLUMBUS CURB RAMP, TYPE A EACH	608 WALKWAY, MISC.: COLUMBUS CURB RAMP, TYPE P-7 EACH	608 WALKWAY, MISC.: COLUMBUS CURB RAMP, TYPE P-4 MODIFIED EACH	608 CONCRETE STEPS, TYPE B, AS PER PLAN FT	608 WALKWAY, MISC.: BRICK PAVER WALK SF		622 PORTABLE BARRIER, UNANCHORED, AS PER PLAN FT		622 PORTABLE BARRIER, ANCHORED, AS PER PLAN FT		626* BARRIER REFLECTOR, TYPE 1, ONE-WAY EACH		626* BARRIER REFLECTOR, TYPE 2, ONE-WAY EACH		607 GATE, TYPE CLT, AS PER PLAN "B" EACH	
		01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	04/MPO/ OT	05/NHS/ OT/COL	01/NHS/ PV	04/MPO/ OT	05/NHS/ OT/COL	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	04/MPO/ OT	06/ENH/ OT/COL	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV
230																	839	703	661	1150								
240		1	391	497																							1	1
241																						106	134	59	76			
259					3441	54	7516	541	30	369	6	1	1		233	1703												
260					9481	135		667	39		10			14	358	480												
TOTALS CARRIED TO GENERAL SUMMARY		1	391	497	12922	189	7516	1208	69	369	16	1	1	14	591	2183	839	703	661	1150		106	134	59	76		1	1

* QUANTITY CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY ON SHEET 961

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

220
1815

D:\2012\2012048\FRA\105523\ROADWAY\SHEETS\105523SS002.DGN
11/21/2021
2:21:33 PM
QDOTV8iSTD_USER

SHEET NO.	601 TIED CONCRETE BLOCK MAT, TYPE 1 SY			601 TIED CONCRETE BLOCK MAT, TYPE 2 SY			601 ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY			601 PAVED GUTTER, TYPE 1-2, AS PER PLAN FT			601 CONCRETE SLOPE PROTECTION SY			660 SODDING UNSTAKED SY			670 DITCH EROSION PROTECTION SY		
4	01/NHS/PV	01/NHS/PV		01/NHS/PV	01/NHS/PV		01/NHS/PV	01/NHS/PV		01/NHS/PV	01/NHS/PV		01/NHS/PV	01/NHS/PV		01/NHS/PV	01/NHS/PV		01/NHS/PV	01/NHS/PV	
236	98	125		107	136		3	3		251	320		496	631		42	53		1018	1295	
TOTALS CARRIED TO GENERAL SUMMARY	98	125		107	136		3	3		251	320		496	631		42	53		1018	1295	

SHEET NO.	832 STORM WATER POLLUTION PREVENTION PLAN LS		832 STORM WATER POLLUTION PREVENTION INSPECTIONS LS		832 STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE LS		832 EROSION CONTROL EACH	
4	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV
236								
261	LS	LS	LS	LS	LS	LS	506000	644000
TOTALS CARRIED TO GENERAL SUMMARY	LS	LS	LS	LS	LS	LS	506000	644000

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED CJC
CHECKED CWL

EROSION CONTROL SUBSUMMARY

FRA-70/71-12.68/14.86

SHEET NO.	602 CONCRETE MASONRY CY	605 6" UNCLASSIFIED PIPE UNDERDRAINS FT		605 6" BASE PIPE UNDERDRAINS FT		605 4" UNCLASSIFIED PIPE UNDERDRAINS FT		605 4" BASE PIPE UNDERDRAINS FT		605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		611 4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET FT		611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT		611 4" CONDUIT, TYPE B FT		611 6" CONDUIT, TYPE B FT		611 12" CONDUIT, TYPE B FT		611 12" CONDUIT, TYPE B, 706.02 FT		611 12" CONDUIT, TYPE C FT		611 15" CONDUIT, TYPE B FT		611 15" CONDUIT, TYPE B, 706.02 FT		611 15" CONDUIT, TYPE B, 706.11 JOINTS FT		611 15" CONDUIT, TYPE B, AS PER PLAN FT		611 15" CONDUIT, TYPE C FT	
	01/NHS /PV	01/NHS /PV	05/NHS/ OT/COL	05/NHS/ OT/COL	01/NHS /PV	05/NHS/ OT/COL	01/NHS /PV	05/NHS/ OT/COL	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	05/NHS/ OT/COL	01/NHS /PV	01/NHS /PV	01/NHS /PV		01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV
242	0.9	1.1																																				
243																							4	6					259	329	2	3	249	317	34	44	143	182
244																											44	56	408	520	6	7	32	41	105	134	324	412
245																													311	395					31	39	308	391
246																							34	43	7	9			44	56	7	9			94	120		
250									1730	2201	55	70	2876	3661			71	90			73	92																
251									1185	1508	143	181	2839	3614			55	69			37	47																
252							1025		2164	2754	53	67	2768	3522	40		66	84	22		62	79																
252A									1046	1332	192	241	2253	2840			76	96			70	90																
252B			12	345	43	9	659	311	21	26	80	102	400	508	123	20	17	21			55	70																
TOTALS CARRIED TO GENERAL SUMMARY	0.9	1.1	12	345	43	9	1684	311	6146	7821	523	661	11136	14145	163	20	285	360	22		297	378	38	49	7	9	44	56	1022	1300	15	19	281	358	264	337	775	985

SHEET NO.	611 15" CONDUIT, TYPE C, 706.02 WITH 706.11 JOINTS FT		611 15" CONDUIT, TYPE C, AS PER PLAN FT		611 18" CONDUIT, TYPE B FT		611 18" CONDUIT, TYPE C FT		611 21" CONDUIT, TYPE B FT		611 21" CONDUIT, TYPE B, 706.02 WITH 706.11 JOINTS FT		611 21" CONDUIT, TYPE C FT		611 24" CONDUIT, TYPE B FT		611 24" CONDUIT, TYPE C FT		611 27" CONDUIT, TYPE B FT		611 27" CONDUIT, TYPE C FT		611 30" CONDUIT, TYPE C FT		611 36" CONDUIT, TYPE B FT		611 36" CONDUIT, TYPE B, 706.02 FT		611 24" CONDUIT, TYPE B, AS PER PLAN FT		611 CONDUIT, BORED OR JACKED, AS PER PLAN, 42" CONDUIT, TYPE C, 748.06 (0.625" WALL THICKNESS) FT		611 18" CONDUIT, TYPE B, 748.01, CLASS 52, AS PER PLAN FT		611 18" CONDUIT, TYPE C, AS PER PLAN FT		611 CONDUIT, BORED OR JACKED, 42" TYPE B, 748.06 FT	
	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV
243			10	12	50	63					36	46			7	8	44	55			229	292					4	6			128	164			12	16		
244	125	159	7	8	308	391									90	115			57	73	83	105	172	220			4	6					5	7				
245							113	144	33	43	8	11	110	139	51	64	94	119					61	78	55	71			4	6							55	71
246					79	101	2	2																														
TOTALS CARRIED TO GENERAL SUMMARY	125	159	17	20	437	555	115	146	33	43	44	57	110	139	148	187	138	174	57	73	312	397	233	298	55	71	8	12	4	6	128	164	5	7	12	16	55	71

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED CJC
CHECKED CWL

DRAINAGE SUBSUMMARY

FRA-70/71-12.68/14.86

CALCULATED CJC | CHECKED CWL

DRAINAGE SUBSUMMARY

SHEET NO.	SPECIAL	SPECIAL	SPECIAL	SPECIAL	837		611	611	611		611	611	611		611	611	611		SPECIAL	
	CITY OF COLUMBUS 12" PIPE, 706.02 WITH 706.11 JOINTS, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL	CITY OF COLUMBUS 12" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL	CITY OF COLUMBUS 15" PIPE, 706.02 WITH 706.11 JOINTS, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL	CITY OF COLUMBUS 6" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL	LINER PIPE, 27" I.D., 707.12		CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 6		CATCH BASIN, NO. 6, AS PER PLAN	CATCH BASIN, NO. 7	CATCH BASIN, NO. 8		CATCH BASIN, NO. 8, AS PER PLAN	CATCH BASIN, NO. 2-2B	CATCH BASIN, NO. 2-3		CITY OF COLUMBUS STANDARD CURB AND GUTTER INLET (AA-S125A WITH GRATE AA-S128)	
⚠4	FT	FT	FT	FT	FT		EACH	EACH	EACH		EACH	EACH	EACH		EACH	EACH	EACH		EACH	
	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS /PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	05/NHS/ OT/COL
230							1	2	3	3			1	2						
231							3	4	3	3	1	2	1	1	1	2	2	3		
232												1	2	3		1	1	2	3	1
233							1	1	1	2			1	1			1			1
243					162	207														
245			161	206	114															
246	71	91	56	72	29	25	31	44	55											
TOTALS CARRIED TO GENERAL SUMMARY	71	91	217	278	143	25	31	44	55	162	207	5	7	7	8	1	3	1	1	1	1	4	6	1	3	3	6	1	3	3	2

SHEET NO.	SPECIAL	SPECIAL	611	SPECIAL	611	611	611	611	611	SPECIAL			611	611	611			611
	CITY OF COLUMBUS RECTANGULAR CATCH BASIN (AA-S135 WITH GRATE AA-S140)	CITY OF COLUMBUS STANDARD CATCH BASIN (AA-S133A WITH GRATE AA-S141)	DRAINAGE STRUCTURE, MISC.: GATEWELL RECONSTRUCTED TO GRADE	CITY OF COLUMBUS 8" PIPE, WITH TYPE I BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL	INLET NO. 3 FOR SINGLE SLOPE BARRIER, TYPE CI, AS PER PLAN	INLET NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	INLET NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN	MANHOLE, NO. 3	MANHOLE, NO. 3, AS PER PLAN	CITY OF COLUMBUS MANHOLE, TYPE C (AA-S102)			CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	INLET ADJUSTED TO GRADE, AS PER PLAN	MANHOLE ADJUSTED TO GRADE, AS PER PLAN			PRECAST REINFORCED CONCRETE OUTLET
⚠4	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH			EACH	EACH	EACH			EACH
	05/NHS/ OT/COL	01/NHS/ PV	01/NHS/ PV	01/NHS /PV	01/NHS /PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	05/NHS/ OT/COL	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV
230					1		1	2	2	3	3		1							
231						4	4	2	2	4	4	2	2							
232	1	2	2				1			4	5	1	2	2	3	1				
233										1	2	1	1	1	2					
234				1												1	1	1	1	2	1					
245				32	41															
250																			1	2
251																			1	
TOTALS CARRIED TO GENERAL SUMMARY	1	2	2	1	32	41	1	4	6	4	4	12	14	4	6	3	5	1	1	1	1	1	2	1	2	2

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

FRA-70/71-12.68/14.86

SHEET NO.	SPECIAL INCREASE OR DECREASE IN EXCAVATION AND BACKFILL (COLUMBUS 811) CY 01/NHS/PV		638 WATER WORK, MISC.: 1.5" WATER TAP (COLUMBUS 805) EACH 01/NHS/PV	638 WATER WORK, MISC.: 3" WATER SERVICE LINE TRANSFER (COLUMBUS 805) EACH 01/NHS/PV	638 WATER WORK, MISC.: 6" WATER SERVICE LINE TRANSFER (COLUMBUS 805) EACH 01/NHS/PV	SPECIAL 6" WATER MAIN DIP AND FITTINGS (COLUMBUS 801) FT 01/NHS/PV	638 WATER WORK, MISC.: 20" x 6" TAPPING SLEEVE AND VALVE AND APPURTENANCES EACH 01/NHS/PV	638 WATER WORK, MISC.: 24" x 6" TAPPING SLEEVE AND VALVE AND APPURTENANCES EACH 01/NHS/PV	SPECIAL 8" WATER MAIN DIP AND FITTINGS (COLUMBUS 801) FT 01/NHS/PV	SPECIAL 8" GATE VALVE WITH VALVE BOX (COLUMBUS 802) EACH 01/NHS/PV		SPECIAL 12" WATER MAIN DIP AND FITTINGS (COLUMBUS 801) FT 01/NHS/PV	SPECIAL 12" GATE VALVE WITH VALVE BOX (COLUMBUS 802) EACH 01/NHS/PV		SPECIAL 20" WATER MAIN DIP AND FITTINGS (COLUMBUS 801) FT 01/NHS/PV		638 WATER WORK, MISC.: 1.5" CURB STOP (COLUMBUS 805) EACH 01/NHS/PV		SPECIAL CUT AND PLUG EXISTING 6" WATER LINE (COLUMBUS 808) EACH 01/NHS/PV	SPECIAL CUT AND PLUG EXISTING 8" WATER LINE (COLUMBUS 808) EACH 01/NHS/PV	SPECIAL CUT AND PLUG EXISTING 10" WATER LINE (COLUMBUS 808) EACH 01/NHS/PV	SPECIAL CUT AND PLUG EXISTING 12" WATER LINE (COLUMBUS 808) EACH 01/NHS/PV
253			2	1	1	194	1	1	62	1		611	2				2					
254																			1	4	1	2
255						110									4				1			
TOTALS CARRIED TO GENERAL SUMMARY	40		2	1	1	304	1	1	62	1		611	2		4		2		2	4	1	2

SHEET NO.	SPECIAL CUT AND PLUG EXISTING 20" WATER LINE (COLUMBUS 808) EACH 01/NHS/PV	SPECIAL 20" BUTTERFLY VALVE WITH VALVE BOX (COLUMBUS 802) EACH 01/NHS/PV	SPECIAL 6" GATE VALVE WITH VALVE BOX (COLUMBUS 802) EACH 01/NHS/PV	638 WATER WORK, MISC.: 6" WATER MAIN ABANDONED (COLUMBUS 808) EACH 01/NHS/PV	638 WATER WORK, MISC.: 8" WATER MAIN ABANDONED (COLUMBUS 808) EACH 01/NHS/PV	SPECIAL CITY OF COLUMBUS MANHOLE, TYPE C (AA-S102) EACH 01/NHS/PV	SPECIAL CITY OF COLUMBUS MANHOLE, TYPE C, AS PER PLAN (AA-S102) EACH 01/NHS/PV	SPECIAL CITY OF COLUMBUS 18" CONDUIT, C905 PIPE, WITH TYPE 1 BEDDING, WITH ITEM 912 COMPACTED GRANULAR MATERIAL EACH 01/NHS/PV	SPECIAL 6" FIRE HYDRANT (COLUMBUS 809) EACH 01/NHS/PV	611 MANHOLE ADJUSTED TO GRADE, AS PER PLAN (SANITARY) EACH 01/NHS/PV	638 WATER WORK, MISC.: 20" WATER MAIN ABANDONED (COLUMBUS 808) EACH 01/NHS/PV	SPECIAL FIRE HYDRANT ABANDONED (COLUMBUS 809) EACH 01/NHS/PV	638 WATER WORK, MISC.: FIRE HYDRANT, RELOCATED (COLUMBUS 809) EACH 01/NHS/PV	638 FIRE HYDRANT ADJUSTED TO GRADE EACH 01/NHS/PV	638 FIRE HYDRANT ADJUSTED TO GRADE 05/NHS/OT/COL		SPECIAL VALVE BOX ADJUSTED TO GRADE (COLUMBUS 807) EACH 01/NHS/PV	SPECIAL VALVE BOX ADJUSTED TO GRADE (COLUMBUS 807) EACH 05/NHS/OT/COL	SPECIAL DUCTILE IRON FITTINGS, INCREASE OR DECREASE (COLUMBUS 801) LB 01/NHS/PV		611 MANHOLE ADJUSTED TO GRADE, AS PER PLAN EACH 01/NHS/PV	
248						3	1	204		2												
253		1	1						3				1									
254				1	2							4			1			11	9			
255	1		1	1					1		1	1		1				9			1	
TOTALS CARRIED TO GENERAL SUMMARY	1	1	2	2	2	3	1	204	4	2	1	5	1	1	1			20	9	500	1	

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED JMB
CHECKED CWL

WATER WORK & SANITARY SEWER SUBSUMMARY

FRA-70/71-12.68/14.86

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ELECTRICAL SUBSUMMARY

CALCULATED CJC
CHECKED ATR

SHEET NO.	HANDHOLE	SUBMERSIBLE SEPARABLE CONNECTOR	(3) - 750KCMIL Cu, 15kV, XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)-350KCMIL Cu, 600V NEUTRAL		2x1 CONCRETE DUCT BANK - 5" PVC (TDMIS-3000)	PADMOUNT SF6 SWITCHGREAR	2x2 CONCRETE DUCT BANK - 5" PVC (TDMIS-3000)	BORE SPACERS FOR 6" SCH 40 PVC CONDUIT	75kVA LOOP FEED SINGLE PHASE PADMOUNT TRANSFORMER (TDMIS-1201)	300kVA LOOP FEED THREE PHASE PADMOUNT TRANSFORMER, 14.4 kV, DELTA/208/120 (TDMIS-1202)	750kVA LOOP FEED THREE PHASE PADMOUNT TRANSFORMER, 14.4kV, DELTA/480/277 (TDMIS-1202)	FIBERGLASS FLAT PAD FOR SINGLE PHASE TRANSFORMERS (TDMIS-1009)	50'/2 WOOD POLE	THREE PHASE DEADEND ATTACHMENTS (TDMIS-406)	WOOD CROSSARM (TDMIS-10)	PRIMARY DOWN GUY (TDMIS-100)	DISTRIBUTION POLE GROUND (TDMIS-7)	DISTRIBUTION RISER (TDMIS-1001)	11.25° SCH 40 PVC CONDUIT SWEEP	DOP MANHOLE (TDMIS-1015)		4'x 4' x 4' PULLBOX	BRIDGE MOUNTED CONDUIT HANGER	CABLE TRAY RISER	22.5° SCH 40 PVC CONDUIT SWEEP	FIBERGLASS TO PVC CONDUIT COUPLER
4	EACH	EACH	FT		FT	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
	05/NHS/ OT/COL	05/NHS/ OT/COL	01/NHS/ PV	05/NHS/ OT/COL	05/NHS/ OT/COL	05/NHS/ OT/COL	05/NHS/ OT/COL	01/NHS/ PV	05/NHS/ OT/COL	05/NHS/ OT/COL	05/NHS/ OT/COL	05/NHS/ OT/COL	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	05/NHS/ OT/COL	01/NHS/ PV	05/NHS/ OT/COL	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV
237			1970					110					1	1	1	2	1	1	12	4		1	65	1	6	6
238	1	1	238		262				1			1										1				
239	3	6		1245	165	1	721		1	1	1	1									5					
TOTALS CARRIED TO GENERAL SUMMARY	4	7	2208	1245	427	1	721	110	2	1	1	2	1	1	1	2	1	1	12	4	5	2	65	1	6	6

SHEET NO.	WOOD POLE, REMOVAL (TDMIS-1600)	OVERHEAD TRANSFORMER, REMOVAL (TDMIS-1600)	WIRE AND CABLE REMOVAL (TDMIS 1600)	6" FIBERGLASS CONDUIT EXPANSION FITTINGS	ADJUSTING EXISTING GRADE	5" FIBERGLASS 90° SWEEP	EXISTING MANHOLE REMOVAL	MEDIUM VOLTAGE CABLE ACCEPTANCE TESTING	5" SCH 40 PVC CONDUIT	6" SCH 40 PVC CONDUIT	30" DIRECTIONAL BORE AND PIPE, 748.06	5" XHW FIBERGLASS CONDUIT	6" XHW FIBERGLASS CONDUIT	4" SCH 40 PVC CONDUIT	(3)-350KCMIL Cu, 15KV, XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)-4/0 Cu, 600V NEUTRAL	(3)-#1 AL, 15kV, XLP WITH(1)-#2 AL, 600V NEUTRAL	2x3 CONCRETE DUCT BANK - 6" PVC (TDMIS-3000)	3x3 CONCRETE DUCT BANK - 5" PVC (TDMIS-3000)		PADMOUNT TRANSFORMER RELOCATION	(1)-250KCMIL Cu, 15KV, XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)-1/0 Cu, 600V NEUTRAL	(3)-500KCMIL Cu, 15KV, XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)-350KCMIL Cu, 600V NEUTRAL	(3)-#1 Cu, 15KV, XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)-#1 Cu, 600V NEUTRAL	(2) - #2 Al, 15KV XLP, 133% INS JCN		
4	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT		EACH	FT	FT	FT	FT		
	05/NHS/ OT/COL	05/NHS/ OT/COL	05/NHS/ OT/COL	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	05/NHS/ OT/COL	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	05/NHS/ OT/COL	01/NHS/ PV	05/NHS/ OT/COL	05/NHS/ OT/COL	05/NHS/ OT/COL	05/NHS/ OT/COL		
237				11						5254	551		6210													
238	5				3	12	1		84			777		347	1407	420	238	196		2	282					
239	7	11	7400		1			12											475			1245	1317	125		
TOTALS CARRIED TO GENERAL SUMMARY	12	11	7400	11	4	12	1	12	84	5254	551	777	6210	347	1407	420	238	196	475	2	282	1245	1317	125		

NO.	DESCRIPTION	REV. BY	DATE
2	DOP TDMIS CHANGE	CWL	11-12-2021
4	FUNDING CODE CHANGE	CWL	11-29-2021

FRA-70/71-12.68/14.86

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SHEET NO.	255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC FS SY 05/NHS/OT/COL	255 FULL DEPTH PAVEMENT SAWING FT 05/NHS/OT/COL			SPECIAL 4" CONDUIT RISER EACH 05/NHS/OT/COL	SPECIAL CONDUIT ENCASED, 1 - 4" FT 05/NHS/OT/COL	SPECIAL CONDUIT ENCASED, 2 - 4" FT 05/NHS/OT/COL	SPECIAL CONDUIT ENCASED, 6 - 4" FT 05/NHS/OT/COL	SPECIAL CONDUIT ENCASED, 8 - 4" FT 05/NHS/OT/COL	SPECIAL PRIVATE TELECOM MANHOLE, AS PER PLAN EACH 05/NHS/OT/COL
239	86	276								
249	95	564			4	204	122	26	1117	2
TOTALS CARRIED TO GENERAL SUMMARY	181	840			4	204	122	26	1117	2

SHEET NO.

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

TOTALS CARRIED TO GENERAL SUMMARY

CALCULATED CJC
CHECKED ATR

TELECOM SUBSUMMARY

FRA-70/71-12.68/14.86

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SHEET NO.	STATION TO STATION		203 EXCAVATION CY		203 EMBANKMENT CY		203 EMBANKMENT, AS PER PLAN "A" CY	203 EMBANKMENT, AS PER PLAN "B" CY		204 GRANULAR MATERIAL, TYPE B CY	204 EXCAVATION OF SUBGRADE CY		203 GRANULAR EMBANKMENT CY	203 GRANULAR EMBANKMENT, AS PER PLAN CY		659 SEEDING AND MULCHING (SM) SY	659 SOIL ANALYSIS TEST EACH		659 TOPSOIL (111*(SM))/(1000) CY	659 REPAIR SEEDING AND MULCHING (0.05*(SM)) SY	659 INTER-SEEDING (0.05*(SM)) SY	659 COMM. FERTILIZER [(30*(SM))+ (20*.05*(SM))]*9 /(1000*2000) TON	659 LIME (SM)/(4840) ACRE	659 WATER [(2*300*(SM)) +(300*0.05*(SM))]*9 /(1000*1000) MGAL
	EB I-70																							
384	125+96.00	126+50.00	162		0											0								
385	126+97.68	127+96.26	209		0											0								
386	128+26.26	129+00.00	198		3											79								
387	129+50.00	130+50.00	92		6											53								
388	131+00.00	132+00.00	55		29											129								
389	132+41.81	133+00.00	47		36											225								
390	133+50.00	134+05.00	60		9											193								
391	4158+00.00	4159+00.00	1575		0											230								
392	4159+50.00	4151+00.00	507		0											247								
393	4161+50.00	4162+50.00	237		0											161								
394	4163+00.00	4164+00.00	203		16											211								
395	4164+50.00	4165+50.00	193		43											189								
396	4166+00.00	4170+00.00	199		0								874			19								
397	4170+50.00	4171+00.00	689		0								4184			122								
398	4171+50.00	4172+00.00	446		0								5770			198								
399	4172+50.00	4173+00.00	441		0								7432			239								
400	4173+50.00	4174+00.00	290		0								8653			227								
401	4174+50.00	4175+00.00	58		0		0						8810	2007	4	181								
402	4175+63.96	4175+93.88	0		0		0							3113		32								
403	4176+87.27	4177+17.18	0		109											190								
404	4177+50.00	4177+77.84	0		131											198								
405	4178+00.00	4178+50.00	0		908											452								
406	4179+00.00	4180+00.00	0		538											738								
407	4180+50.00	4181+50.00	1310		403											720								
408	4182+00.00	4183+50.00	4289		332											625								
409	4184+00.00	4185+50.00	3308		6											22								
410	4186+00.00	4187+00.00	2582		0											0								
411	4187+50.00	4188+50.00	1399		8											0								
412	4189+00.00	4190+00.00	199		8											0								
413	4190+50.00	4191+50.00	264		27											100								
414	4192+00.00	4193+00.00	219		86											667								
415	4193+45.18	4194+50.00	622		100											874								
416	4195+00.00	4196+50.00	563		126											996								
417	4196+99.64	4198+00.00	114		11											32								
418	4198+50.00	4200+00.00	113		0											0								
419	4200+50.00	4202+00.00	175		9											137								
420	4202+50.00	4204+00.00	197		8											153								
421	4204+50.00	4205+50.00	88		0											28								
422	4206+00.00	4207+50.00	60		0											0								
423	4208+00.00	4208+14.77	4		0											0								
	WB I-70																							
424	160+50.00	161+50.00	2978		0											872								
425	162+00.00	183+00.00	893		24											553								
426	183+50.00	185+00.00	55		649											536								
427	185+50.00	186+50.00	1316		540											398								
428	187+00.00	188+00.00	1803		0											339								
429	188+50.00	189+00.00	0		0											22	4							
	NB I-71																							
430	252+50.00	253+50.00	340					14								0								
431	254+00.00	255+00.00	586		50			30								12								
432	255+50.00	257+00.00	761		177			43								0								
433	257+50.00	258+50.00	494		0											31								
434	259+00.00	260+00.00	418		78											348								
435	260+50.00	262+00.00	79		2710											1250								
436	262+50.00	264+00.00	65		7596											1631								
437	264+34.96	265+00.00	0		5907											878								
438	265+50.00	266+34.96	60		7106											992								
439	266+50.00	267+50.00	0		10836											1294								
440	268+00.00	269+00.00	1658		5273											1537								
SUBTOTALS CARRIED TO SHEET 229			4 32673		43898			87					35723	5120		19360	4							

CALCULATED ATR
CHECKED CWL

EARTHWORK SUBSUMMARY AND CALCULATIONS

NO.	DESCRIPTION	REV. BY	DATE
4	UPDATED EARTHWORK	CWL	11-29-2021

FRA-70/71-12.68/14.86

226
1815

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11/28/2021
8:18:43 AM
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SHEET NO.	STATION TO STATION		203 EXCAVATION CY		203 EMBANKMENT CY		203 EMBANKMENT, AS PER PLAN "A" CY	203 EMBANKMENT, AS PER PLAN "B" CY		204 GRANULAR MATERIAL, TYPE B CY	204 EXCAVATION OF SUBGRADE CY		203 GRANULAR EMBANKMENT CY	203 GRANULAR EMBANKMENT, AS PER PLAN CY		659 SEEDING AND MULCHING (SM) SY	659 SOIL ANALYSIS TEST EACH		659 TOPSOIL (111*(SM))/(1000) CY	659 REPAIR SEEDING AND MULCHING (0.05*(SM)) SY	659 INTER-SEEDING (0.05*(SM)) SY	659 COMM. FERTILIZER [(30*(SM))+ (20*.05*(SM))]*9 /(1000*2000) TON	659 LIME (SM)/(4840) ACRE	659 WATER [(2*300*(SM)) +(300*0.05*(SM))]*9 /(1000*1000) MGAL
	NB I-71																								
441	269+50.00	270+50.00	1325		830											1870									
442	271+00.00	271+50.00	455		136											1091									
443	272+00.00	272+50.00	276		48											510									
444	273+00.00	273+64.54	115		1											115									
	RAMP A5																								
445	5003+23.96	5004+00.00	439		3											0									
446	5004+50.00	5005+50.00	776		139											139									
447	5006+00.00	5007+00.00	1170		44											508									
448	5007+50.00	5008+00.00	1177		242											574									
449	5008+50.00	5009+50.00	62		2737											781									
450	5010+00.00	5011+00.00	66		7602											1191									
451	5011+50.00	5012+18.10	647		7506											1058									
452	5012+50.00	5013+00.00	41		9024		1591									1356									
453	5013+50.00	5014+00.00	44				10620									1467									
454	5014+50.00	5015+00.00	18				4574									735									
455	5015+06.59	5015+36.59	13				681									293									
	RAMP C3																								
456	3000+16.87	3001+00.00	0		88											0									
457	3001+50.00	3002+50.00	7		100											75									
458	3003+00.00	3004+00.00	3		533											108									
459	3004+50.00	3005+50.00	13		991											627									
460	3006+00.00	3007+00.00	27		179											470									
461	3007+50.00	3008+50.00	111		14											213									
462	3009+00.00	3010+00.00	0		0											0									
	RAMP C5																								
463	5024+38.21	5026+00.00	169		4											173									
464	5026+50.00	5028+00.00	196		439											694									
465	5028+50.00	5030+00.00	269		1627											1142									
466	5030+50.00	5031+36.49	156		2087											711									
467	5031+66.55	5032+65.33	58		249											8									
468	5033+00.00	5033+50.00	61		311											72									
469	5034+00.00	5034+83.94	26		455											149									
470	5034+97.48	5035+50.00	2		744											241									
471	5036+00.00	5036+50.00	33		911											197									
472	5037+00.00	5038+00.00	32		799											314									
473	5038+50.00	5039+50.00	18		279		703									686									
474	5040+00.00	5041+17.78	62				6025									1466									
475	5041+50.00	5042+00.00	132		2060		2950									1317									
476	5042+50.00	5047+55.00	1371		86											567									
477	5061+83.35	5047+72.06	2804		0											598									
478	5062+50.00	5063+50.00	5864		670											1092									
479	5064+00.00	5065+00.00	881		3615											997									
480	5065+50.00	5066+50.00	63		6681											1333									
481	5067+00.00	5068+00.00	58		11034											1714									
482	5068+50.00	5069+00.00	27		9070		167									1192									
483	5069+50.00	5070+00.00	13				9977									1112									
484	5070+50.00	5071+00.00	0				6409									696									
485	5071+18.62	5074+10.30	99				1258							633		267									
486	5074+40.30	5074+50.00	280				0							1612		0									
487	5075+00.00	5075+50.00	170		2		0							973		84									
488	5076+00.00	5076+08.84	66		0		0						386	103		84									
489	5076+50.00	5077+00.00	93		17								909			253									
490	5077+50.00	5078+00.00	68		49								897			217									
491	5078+50.00	5079+00.00	53		24								473			119									
492	5079+12.85	5079+50.00	61		13		0						555	32		107									
493	5080+00.00	5080+15.86	52		5											97									
494	5080+45.86	5081+38.82	0		11											67									
495	5081+68.82	5081+98.63	0		9											71									
496	5082+00.00	5082+50.00	0		6											158									
SUBTOTALS CARRIED TO SHEET 229			20022		71474		44955						3220	3353		31176									

4

CALCULATED ATR
CHECKED CWL

EARTHWORK SUBSUMMARY AND CALCULATIONS

NO.	DESCRIPTION	REV. BY	DATE
4	UPDATED EARTHWORK	CWL	11-29-2021

FRA-70/71-12.68/14.86

227
1815

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11/28/2021
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SHEET NO.	STATION TO STATION		203 EXCAVATION		203 EMBANKMENT		203 EMBANKMENT, AS PER PLAN "A"	203 EMBANKMENT, AS PER PLAN "B"		204 GRANULAR MATERIAL, TYPE B	204 EXCAVATION OF SUBGRADE					659 SEEDING AND MULCHING (SM)	659 SOIL ANALYSIS TEST		659 TOPSOIL (111*SM)/(1000)	659 REPAIR SEEDING AND MULCHING (0.05*SM)	659 INTER-SEEDING (0.05*SM)	659 COMM. FERTILIZER [(30*SM)+(20*.05*SM)]*9/(1000*2000)	659 LIME (SM)/(4840)	659 WATER [(2*300*SM)+(300*0.05*SM)]*9/(1000*1000)
			CY		CY		CY	CY		CY	CY					SY	EACH		CY	SY	SY	TON	ACRE	MGAL
	RAMP C5																							
497	5083+00.00	5083+50.00	0		4											172								
498	5084+00.00	5084+20.00	0		3											58								
499	5084+50.00	5085+00.00	0		650											50								
500	5085+50.00	5086+00.00	0		310											8								
	FRONT ST.																							
501	147+50.00	147+91.50	26		3					46	46					0								
502	148+00.00	148+50.00	57		14					144	144					0								
503	148+61.92	150+88.81	139		25					240	240					0								
504	151+19.35	151+50.00	94		55					193	193					0								
505	152+00.00	152+50.00	68		5					112	112					0								
	FULTON ST.																							
506	19+25.00	19+50.00	0		0											0								
507	19+87.23	20+00.00	123		4					104	104					0								
508	20+20.46	20+50.00	88		2					94	94					0								
509	20+55.92	21+00.00	84		3	4				98	98					0								
510	21+24.00	21+50.00	83		52					104	104					0								
511	22+00.00		73		108					108	108					0								
512	22+50.00		67		61					107	107					0								
513	23+00.00	23+15.00	18		1					30	30					0								
	LIVINGSTON AVE.																							
514	200+00.00	200+50.00	50		28					84	84					52								
515	201+00.00	201+94.78	51		57					108	108	4				98								
516	202+00.00	202+45.02	22		16					44	44					32								
517	204+02.13	204+50.00	78		4					111	111					58								
518	204+61.50	205+00.00	55		31					63	63					22								
519	205+50.00	206+00.00	97		179					140	140					23								
520	206+50.00	206+80.00	41		129					83	83					48								
521	207+00.00	207+47.00	45		65					73	73					31								
522	207+50.00		0		0					0	0					0								
	RELOCATED BIKE PATH																							
630	8+48.00	8+50.00	54		6											79								
631	9+00.00	9+50.00	1198		1											422								
632	10+00.00	10+50.00	1387		0											53								
633	10+66.95	11+00.00	262		2											0								
634	11+00.40	11+29.28	13		3											0								
635	11+50.00	11+53.75	1		0											0								
	BIKE PATH DETOUR																							
639	1+50.00	2+50.00	32		3											120								
640	3+00.00	3+50.00	126		15											256								
641	4+00.00	4+50.00	120		1											164								
642	5+00.00	5+50.00	27		3											83								
643	6+00.00	6+50.00	47		8											139								
643A	7+00.00	8+00.00	63		15											206								
643B	8+50.00	9+00.00	31		6											97								
643C	9+50.00	10+00.00	28		6											97								
643D	10+50.00	11+00.00	41		27											208								
643E	11+50.00	12+00.00	35		44											222								
643F	12+50.00	13+00.00	36		25											183								
643G	13+50.00	14+50.00	51		5											123								
643H	15+00.00	16+00.00	56		6											142								
643J	16+50.00	17+50.00	55		4											228								
643K	18+00.00	18+50.00	30		2											113								
643L	19+00.00	19+50.00	24		195											300								
SUBTOTALS CARRIED TO SHEET 229			4 5076		2186					2086	2086					3887								

CALCULATED ATR
CHECKED CWL

EARTHWORK SUBSUMMARY AND CALCULATIONS

FRA-70/71-12.68/14.86

NO.	DESCRIPTION	REV. BY	DATE
4	UPDATED EARTHWORK	CWL	11-29-2021

EARTHWORK SUBSUMMARY AND CALCULATIONS

SHEET NO.	STATION TO STATION		203 EXCAVATION		203 EMBANKMENT		203 EMBANKMENT, AS PER PLAN "A"	203 EMBANKMENT, AS PER PLAN "B"		204 GRANULAR MATERIAL, TYPE B	204 EXCAVATION OF SUBGRADE		203 GRANULAR EMBANKMENT	203 GRANULAR EMBANKMENT, AS PER PLAN		659 SEEDING AND MULCHING (SM)	659 SOIL ANALYSIS TEST		659 TOPSOIL (111*(SM))/(1000)	659 REPAIR SEEDING AND MULCHING (0.05*(SM))	659 INTER-SEEDING (0.05*(SM))	659 COMM. FERTILIZER [(30*(SM))+ (20*.05*(SM))]*9 /(1000*2000)	659 LIME (SM)/(4840)	659 WATER [(2*300*(SM)) +(300*0.05*(SM))]*9 /(1000*1000)
			CY		CY		CY	CY		CY	CY		CY	CY		SY	EACH		CY	SY	SY	TON	ACRE	MGAL
	BIKE PATH DETOUR		4																					
643M	20+00.00	20+50.00	113		168											436								
643N	21+00.00	21+50.00	46		68											262	4							
643P	22+00.00	22+50.00	38		0											104								
643R	23+00.00		0		0											0								
SUBTOTALS FROM THIS SHEET			197		236											802	4							
SUBTOTALS FROM SHEET 226			32673		43898			87					35723	5120		19360								
SUBTOTALS FROM SHEET 227			20022		71474		44955					4	3220	3353		31176								
SUBTOTALS FROM SHEET 228			5076		2186					2086	2086				4	3887		4						
SUBTOTALS FOR SEEDING & MULCHING CALCULATIONS								4								55225	2		6130	2761	2761	7.70	11.41	306
TOTALS CARRIED TO THE GENERAL SUMMARY			57771		117794		44955	87		2086	2086		38943	8473		55225	2		6130	2761	2761	7.70	11.41	306

CALCULATED ATR
CHECKED CWL

NO.	DESCRIPTION	REV. BY	DATE
4	UPDATED EARTHWORK	CWL	11-29-2021

FRA-70/71-12.68/14.86

ESTIMATED QUANTITIES

CALCULATED JMB | CHECKED CWL

FRA-70/71-12.68/14.86

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 INLET ABANDONED EACH 01/NHS /PV	01/NHS /PV	202 INLET ABANDONED, AS PER PLAN EACH 01/NHS /PV	01/NHS /PV	202 CATCH BASIN ABANDONED EACH 01/NHS /PV	01/NHS /PV	202 MANHOLE ABANDONED EACH 01/NHS /PV	01/NHS /PV	202 MANHOLE ABANDONED, AS PER PLAN "A" EACH 01/NHS /PV	01/NHS /PV	202 MANHOLE ABANDONED, AS PER PLAN "B" EACH 01/NHS /PV	01/NHS /PV	611 CATCH BASIN, NO. 3 EACH 01/NHS /PV	01/NHS /PV	611 CATCH BASIN, NO. 3A EACH 01/NHS /PV	01/NHS /PV	611 CATCH BASIN, NO. 8 EACH 01/NHS /PV	01/NHS /PV	611 MANHOLE, NO. 3 EACH 01/NHS /PV	01/NHS /PV	611 MANHOLE, NO. 3, AS PER PLAN EACH 01/NHS /PV	01/NHS /PV	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN EACH 01/NHS /PV	01/NHS /PV	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D EACH 01/NHS /PV	01/NHS /PV	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN EACH 01/NHS /PV	01/NHS /PV	606 IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (60 MPH, 48" WIDTH) EACH 01/NHS /PV	01/NHS /PV	622 PORTABLE BARRIER, UNANCHORED, AS PER PLAN FT 01/NHS /PV	01/NHS /PV	622 PORTABLE BARRIER, ANCHORED, AS PER PLAN FT 01/NHS /PV	01/NHS /PV
AB-1	287	4172+81.75 (I-70 EB)		RT			1																															
AB-2	287	4175+04.36 (I-70 EB)		RT			1																															
AB-3	283	4162+97.61 (I-70 EB)		RT			1																															
AB-4	292	4186+08.81 (I-70 EB)		RT					1																													
AB-5	289	4178+43.14 (I-70 EB)		LT									1																									
AB-7	289	4177+86.38 (I-70 EB)		RT											1																							
AB-8	289	4178+23.03 (I-70 EB)		RT											1																							
AB-9	289	4180+72.63 (I-70 EB)		RT											1																							
AB-15	267	122+77.43 (I-70 EB)		RT					1																													
AB-20	310	266+13.10 (I-71 NB)		LT	1																															
AB-27	281	4161+11.59 (I-70 EB)		RT					1																													
AB-29	370	19+87.07 (FULTON ST.)		LT									1																									
AB-50	342	55+88.27 (EX SR 315 NB)		RT	1																																	
AB-100	289	4178+54.36 (I-70 EB)		RT											1																							
AB-101	370	19+72.74 (FULTON ST.)		LT							1																											
B-1	271-275	132+40.00 (I-70 EB)	142+47.00 (I-70 EB)	RT																															1	602.6	401.7		
B-2	285, 287	4170+00.00 (I-70 EB)	4174+50.00 (I-70 EB)	LT																															1			199.8	254.3
B-3	285, 287	4170+85.11 (I-70 EB)	4173+97.24 (I-70 EB)	RT																																		136.2	173.3
B-4	364, 366	6006+03.73 (RAMP C6)	6009+10.70 (RAMP C6)	LT																																			309.2
B-5	292	182+27.67 (I-70 WB)	184+00.76 (I-70 WB)	LT																																76.3	97.2		
B-6	292, 294	184+45.53 (I-70 WB)	188+06.62 (I-70 WB)	RT																																160.3	204.0		
B-7	638	13+90.50 (BIKE DETOUR)	14+29.99 (BIKE DETOUR)	RT																																		16.3	20.7
B-8	638, 638A	14+53.99 (BIKE DETOUR)	21+46.63 (BIKE DETOUR)	RT																																		308.5	392.6
D-30	354	5079+25.00 (RAMP C5)		LT																											1								
D-31	354	5078+49.10 (RAMP C5)		RT																												1							
D-32	354	5077+91.39 (RAMP C5)		RT																												1							
D-33	354	5077+34.00 (RAMP C5)		RT																												1							
D-35	287	4173+00.03 (I-70 EB)		RT																	1																		
D-36	287	4175+14.90 (I-70 EB)		RT																	1																		
D-37	287	4175+16.35 (I-70 EB)		LT																													1						
D-38	354	5077+00.00 (RAMP C5)		RT																			1																
D-41	352	5071+30.61 (RAMP C5)		RT																			1																
D-42	352-354	5075+00.00 (RAMP C5)		RT																			1																
D-43	356	5081+82.79 (RAMP C5)		LT															1																				
D-44	356	5083+39.47 (RAMP C5)		LT																			1																
D-45	356	5081+92.40 (RAMP C5)		RT																												1							
D-50	281	5065+72.77 (RAMP C5)		LT																	1																		
D-51	283	4166+11.70 (I-70 EB)		RT													1																						
D-52	283	4166+11.70 (I-70 EB)		RT																			1																
D-53	285	4170+30.00 (I-70 EB)		RT															1																				
D-54	285	4170+59.91 (I-70 EB)		RT													1																						
D-55	285	4170+55.00 (I-70 EB)		RT																			1																
D-56	292	4185+89.23 (I-70 EB)		LT																					1														
D-57	292	4186+68.00 (I-70 EB)		RT															1																				
D-58	294	4187+57.00 (I-70 EB)		RT													1																						
D-59	294	4188+10.00 (I-70 EB)		RT															1																				
D-60	294	4189+99.14 (I-70 EB)		RT															1																				
D-61	312	270+25.00 (I-71 NB)		RT															1																				
TOTALS CARRIED TO SUBSUMMARY SHEET 219, 220, 223					1	1	1	2	1	2	0	1	1	1	2	2	1	2	3	3	1	2	3	3	0	1	0	1	0	1	2	2	1	1	839	703	661	1150

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	611 CATCH BASIN, NO. 2-2B EACH 01/NHS/PV	611 CATCH BASIN, NO. 2-2B EACH 01/NHS/PV	611 CATCH BASIN, NO. 3 EACH 01/NHS/PV	611 CATCH BASIN, NO. 3 EACH 01/NHS/PV	611 CATCH BASIN, NO. 3A EACH 01/NHS/PV	611 CATCH BASIN, NO. 3A EACH 01/NHS/PV	611 CATCH BASIN, NO. 6 EACH 01/NHS/PV	611 CATCH BASIN, NO. 6 EACH 01/NHS/PV	611 CATCH BASIN, NO. 8 EACH 01/NHS/PV	611 CATCH BASIN, NO. 8 EACH 01/NHS/PV	611 CATCH BASIN, NO. 8, AS PER PLAN EACH 01/NHS/PV	611 CATCH BASIN, NO. 8, AS PER PLAN EACH 01/NHS/PV	611 MANHOLE, NO. 3 EACH 01/NHS/PV	611 MANHOLE, NO. 3 EACH 01/NHS/PV	611 MANHOLE, NO. 3, AS PER PLAN EACH 01/NHS/PV	611 MANHOLE, NO. 3, AS PER PLAN EACH 01/NHS/PV	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D EACH 01/NHS/PV	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D EACH 01/NHS/PV	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN EACH 01/NHS/PV	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN EACH 01/NHS/PV
D-62	312	271+27.21 (I-71 NB)		RT																		1		
D-63	312	271+89.00 (I-71 NB)		RT																		1		
D-64	310	265+52.70 (I-71 NB)		LT													1							
D-66	281	4157+98.16 (I-70 EB)		RT					1															
D-67	350	5068+00.00 (RAMP C5)		RT	1																			
D-68	350	5068+89.91 (RAMP C5)		RT	1																			
D-69	348	5064+56.00 (RAMP C5)		RT																				1
D-70	348	5063+92.72 (RAMP C5)		RT																				1
D-71	342	58+60.70 (EX SR 315 NB)		RT			1																	
D-100	352	5071+14.38 (RAMP C5)		RT					1															
D-101	350	5068+00.00 (RAMP C5)		RT													1							
D-104	281	5062+60.38 (RAMP C5)		LT					1															
D-108	279	5061+00.00 (RAMP C5)		LT													1							
D-110	281	5064+42.90 (RAMP C5)		LT											1									
D-111	283	5067+64.83 (RAMP C5)		LT											1									
D-113	281	5063+24.57 (RAMP C5)		LT											1									
D-114	348	5061+97.48 (RAMP C5)		RT			1																	
D-154	294	4187+04.95 (I-70 EB)		LT																		1		
D-155	294	4187+79.05 (I-70 EB)		LT																		1		
D-157	292	4185+75.68 (I-70 EB)		LT							1													
D-159	354	5078+00.00 (RAMP C5)		RT	1																			
D-160	289	4179+50.87 (I-70 EB)		LT																1				
D-161	289	4177+26.22 (I-70 EB)		LT													1							
D-162	294	187+68.00 (I-70 WB)		RT							1													
D-165	289	4178+41.09 (I-70 EB)		LT													1							
D-188	292	4183+00.32 (I-70 EB)		RT																		1		
D-189	289	4181+00.28 (I-70 EB)		RT																		1		
D-190	289	4179+15.29 (I-70 EB)		RT																		1		
D-191	292	4182+50.59 (I-70 EB)		LT																		1		
D-192	289	4179+50.59 (I-70 EB)		LT							1													
D-201	333 - 335	5030+00.00 (RAMP C5)		RT	1																			
D-202	335	5031+07.19 (RAMP C5)		RT			1																	
D-204	335	5033+20.48 (RAMP C5)		RT																				1
D-205	269	128+65.00 (I-70 EB)		LT			1																	
D-206	269	128+65.00 (I-70 EB)		RT			1																	
D-207	335	5032+85.51 (RAMP C5)		LT					1															
D-208	335	5032+90.46 (RAMP C5)		RT																				1
D-209	269	128+35.00 (I-70 EB)		RT			1																	
D-210	269	128+35.00 (I-70 EB)		LT			1																	
D-211	269	128+26.90 (I-70 EB)		LT									1											
D-212	271	5036+50.00 (RAMP C5)		RT									1											
D-213	327	3005+50.00 (RAMP C3)		RT	1																			
D-214	329	3007+12.85 (RAMP C3)		RT													1							
D-215	329	3008+40.40 (RAMP C3)		RT													1							
D-216	340	5041+41.91 (RAMP C5)		LT					1															
D-217	269	5035+30.15 (RAMP C5)		LT																1				
D-220	306	254+00.00 (I-71 NB)		RT																1				
D-222	306	256+60.40 (I-71 NB)		RT																1				
D-223	316	5004+57.60 (RAMP A5)		RT													1							
D-224	281	4158+16.00 (I-70 EB)		RT					1															
TOTALS CARRIED TO SUBSUMMARY SHEET 223					2	3	3	4	3	3	1	2	1	1	1	2	4	4	2	2	4	4	2	2

CALCULATED JMB CHECKED CWL

ESTIMATED QUANTITIES

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

FRA-70/71-12.68/14.86

231
1815

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11/22/2021
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ESTIMATED QUANTITIES

CALCULATED JMB | CHECKED CWL

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	611 CATCH BASIN, NO. 2-2B EACH 01/NHS/PV	01/NHS/PV	611 CATCH BASIN, NO. 2-3 EACH 01/NHS/PV	01/NHS/PV	611 CATCH BASIN, NO. 6 EACH 01/NHS/PV	01/NHS/PV	611 CATCH BASIN, NO. 7 EACH 01/NHS/PV	01/NHS/PV	611 CATCH BASIN, NO. 8 EACH 01/NHS/PV	01/NHS/PV	611 CATCH BASIN, NO. 8, AS PER PLAN EACH 01/NHS/PV	01/NHS/PV	611 MANHOLE, NO. 3 EACH 01/NHS/PV	01/NHS/PV	611 MANHOLE, NO. 3, AS PER PLAN EACH 01/NHS/PV	01/NHS/PV	SPECIAL CITY OF COLUMBUS STANDARD CURB AND GUTTER INLET (AA-S125A WITH GRATE AA-S128) EACH 01/NHS/PV	01/NHS/PV	05/NHS/OT/COL	SPECIAL CITY OF COLUMBUS RECTANGULAR CATCH BASIN (AA-S135 WITH GRATE AA-S140) EACH 05/NHS/OT/COL	SPECIAL CITY OF COLUMBUS STANDARD CATCH BASIN (AA-S133A WITH GRATE AA-S141) EACH 01/NHS/PV	01/NHS/PV	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D EACH 01/NHS/PV	01/NHS/PV	SPECIAL CITY OF COLUMBUS MANHOLE, TYPE C (AA-S102) EACH 01/NHS/PV	01/NHS/PV	05/NHS/OT/COL
D-225	318	5006+50.00 (RAMP A5)		RT	1																														
D-229	310	263+94.67 (I-71 NB)		RT													1																		
D-230	312	268+50.00 (I-71 NB)		LT									1																						
D-232	308	261+00.00 (I-71 NB)		RT									1																						
D-234	318	5010+00.00 (RAMP A5)		RT									1																						
D-235	310	264+05.12 (I-71 NB)		RT									1																						
D-236	310	266+34+96 (I-71 NB)		LT	1																														
D-237	310	264+59.26 (I-71 NB)		LT													1																		
D-239	310	264+00.00 (I-71 NB)		LT									1																						
D-254	294	4187+04.95 (I-70 EB)		LT															1																
D-255	294	4187+81.55 (I-70 EB)		LT															1																
D-257	292	183+15.98 (I-70 WB)		LT			1																												
D-258	292	184+22.37 (I-70 WB)		LT	1																														
D-259	354	5077+00.00 (RAMP C5)		RT															1																
D-261	364	6006+12.03 (RAMP C6)		RT													1																		
D-262	281	5065+80.00 (RAMP C5)		LT											1																				
D-263	320	5013+70.22 (RAMP A5)		LT							1																								
D-264	320	5014+84.69 (RAMP A5)		RT							1																								
D-265	320	5014+58.61 (RAMP A5)		RT																													1		
D-266	320	5014+50.00 (RAMP A5)		RT													1																		
D-267	287	4174+99.46 (I-70 EB)		LT													1																		
D-268	292	185+72.37 (I-70 WB)		LT													1																		
D-299	292	5090+75.00 (RAMP C5)		LT					1																										
D-300	292	4184+00.69 (I-70 EB)		LT													1																		
D-301	292	4184+88.82 (I-70 EB)		LT													1																		
D-302	292	4185+76.14 (I-70 EB)		LT													1																		
D-305	375	204+09.50 (LIVINGSTON AVE.)		RT																															1
D-306	374	200+69.74 (LIVINGSTON AVE.)		RT																													1		
D-307	375	204+12.61 (LIVINGSTON AVE.)		RT																					1										
D-308	374	203+87.26 (LIVINGSTON AVE.)		RT																						1									
D-309	374	201+05.57 (LIVINGSTON AVE.)		RT																			1												
D-310	374	201+38.34 (LIVINGSTON AVE.)		RT																			1												
D-311	374	200+22.70 (LIVINGSTON AVE.)		RT																			1												
D-312	368	203+31.76 (LIVINGSTON AVE.)		RT																													1		
D-313	371	22+95.00 (FULTON ST.)		RT																										1					
D-314	371	22+00.00 (FULTON ST.)		RT																										1					
D-315	370	21+12.76 (FULTON ST.)		RT																										1					
D-317	370	20+41.88 (FULTON ST.)		RT																			1												
D-318	370	19+91.96 (FULTON ST.)		LT																													1		
D-319	370	19+26.27 (FULTON ST.)		LT																													1		
D-320	368	151+13.60 (FRONT ST.)		RT																			1												
D-321	368	151+23.00 (FRONT ST.)		LT																													1		
D-322	368	151+47.39 (FRONT ST.)		RT																										1					
D-323	368	151+59.90 (FRONT ST.)		LT																			1												
TOTALS CARRIED TO SUBSUMMARY SHEET 223					1	2	0	1	0	1	1	1	2	3	0	1	4	5	1	2	3	3	1	1	2	2	0	1	2	3	1				

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	611 CATCH BASIN, NO. 2-2B EACH 01/NHS/PV	611 CATCH BASIN, NO. 3 EACH 01/NHS/PV	611 CATCH BASIN, NO. 3A EACH 01/NHS/PV	611 CATCH BASIN, NO. 6, AS PER PLAN EACH 01/NHS/PV	SPECIAL CITY OF COLUMBUS STANDARD CURB AND GUTTER INLET (AA-SI25A WITH GRATE AA-SI28) EACH 05/NHS/OT/COL	611 MANHOLE, NO. 3 EACH 01/NHS/PV	611 MANHOLE, NO. 3, AS PER PLAN EACH 01/NHS/PV	SPECIAL CITY OF COLUMBUS MANHOLE, TYPE C (AA-SI02) EACH 01/NHS/PV
D-326	292	4184+88.80 (I-70 EB)		LT						1		
D-327	292	183+16.03 (I-70 WB)		LT			1					
D-328	292	185+73.90 (I-70 WB)		LT	1							
D-329	298	4200+81.39 (I-70 EB)		RT			1					
D-330	298	4201+50.63 (I-70 EB)		RT		1						
D-331	300	4202+53.27 (I-70 EB)		RT			1					
D-332	289,292	4182+00.61 (I-70 EB)		LT							1	
D-333	306	254+00.00 (I-71 NB)		RT				1				
D-334	316	5004+48.92 (RAMP A5)		RT				1				
D-340	375	206+09.66 (LIVINGSTON AVE.)		RT					1			
D-341	374	200+32.19 (LIVINGSTON AVE.)		RT								1
D-342	374	201+05.57 (LIVINGSTON AVE.)		RT								1
D-350	348	5061+19.30 (RAMP C5)		RT						1		
D-351	335	5030+41.57 (RAMP C5)		RT						1		
D-352	271	134+14.52 (I-70 EB)		RT		1						
D-353	292	4182+95.83 (I-70 EB)		LT							1	
D-354	371	21+62.24 (FULTON ST.)		LT								1
TOTALS CARRIED TO SUBSUMMARY SHEET 223					0 / 1	1 / 1	1 / 2	1 / 1	1	1 / 2	1 / 1	1 / 2

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED JMB
CHECKED CWL

ESTIMATED QUANTITIES

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 INLET REMOVED EACH 01/NHS/PV	01/NHS/PV	202 MANHOLE REMOVED EACH 01/NHS/PV	01/NHS/PV	202 CATCH BASIN REMOVED EACH 01/NHS/PV	01/NHS/PV	611 DRAINAGE STRUCTURE, MISC.: CATEWELL RECONSTRUCTED TO GRADE EACH 01/NHS/PV		611 CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN EACH 01/NHS/PV	01/NHS/PV	611 INLET ADJUSTED TO GRADE, AS PER PLAN EACH 01/NHS/PV	01/NHS/PV	611 MANHOLE ADJUSTED TO GRADE, AS PER PLAN EACH 01/NHS/PV	01/NHS/PV	05/NHS/ OT/COL				
DJ-12	372	11+70.88 (MOUND ST.)		RT									1										
DJ-13	372	11+95.78 (MOUND ST.)		LT													1						
DJ-14	372	12+05.15 (MOUND ST.)		RT													1						
DJ-15	372	12+32.40 (MOUND ST.)		RT											1								
DJ-16	372	12+34.55 (MOUND ST.)		LT											1								
DJ-17	316	5004+24.33 (RAMP A5)		RT													1						
DJ-300	375	205+82.26 (LIVINGSTON AVE.)		RT															1				
DJ-301	318	5009+96.16 (RAMP A5)		LT							1												
DR-2	287	4176+00.65 (I-70 EB)		RT			1																
DR-3	287	4173+93.28 (I-70 EB)		RT					1														
DR-4	287	4175+67.29 (I-70 EB)		RT					1														
DR-5	287	4175+77.80 (I-70 EB)		RT			1																
DR-6	289	4181+71.99 (I-70 EB)		LT					1														
DR-7	292	4182+71.83 (I-70 EB)		RT	1																		
DR-8	292	4186+60.70 (I-70 EB)		RT	1																		
DR-10	294	4189+99.14 (I-70 EB)		RT	1																		
DR-13	292	4184+20.40 (I-70 EB)		RT	1																		
DR-14	292	4185+04.95 (I-70 EB)		RT	1																		
DR-15	269	130+96.22 (I-70 EB)		RT	1																		
DR-17	269	128+25.44 (I-70 EB)		LT	1																		
DR-18	269	128+26.90 (I-70 EB)		LT					1														
DR-19	335	5032+62.86 (RAMP C5)		LT	1																		
DR-20	265	121+02.32 (I-70 EB)		RT	1																		
DR-21	329	3008+40.40 (RAMP C3)		RT	1																		
DR-22	356	5080+31.01 (RAMP C5)		RT					1														
DR-23	318	5006+31.25 (RAMP A5)		RT					1														
DR-24	318	5007+81.37 (RAMP A5)		RT	1																		
DR-25	310	264+09.85 (I-71 NB)		LT					1														
DR-26	310	263+94.82 (I-71 NB)		RT			1																
DR-27	320	5014+19.04 (RAMP A5)		LT	1																		
DR-28	320	5014+64.48 (RAMP A5)		LT			1																
DR-29	312	270+40.56 (I-71 NB)		RT					1														
DR-30	322	5016+01.77 (RAMP A5)		LT			1																
DR-31	322	5016+08.99 (RAMP A5)		LT					1														
DR-37	306	257+57.31 (I-71 NB)		RT					1														
DR-38	316	258+72.82 (I-71 NB)		RT					1														
DR-40	267	124+01.85 (I-70 EB)		RT	1																		
DR-41	287	4176+91.54 (I-70 EB)		RT					1														
DR-42	287	4176+84.91 (I-70 EB)		RT	1																		
DR-43	289	4177+91.18 (I-70 EB)		RT	1																		
DR-44	289	4178+03.68 (I-70 EB)		RT			1																
TOTALS CARRIED TO SUBSUMMARY SHEET 219,223					7	8	3	3	5	7	1		0	1	1	1	1	2	1				

CALCULATED JMB CHECKED CWL

ESTIMATED QUANTITIES

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

FRA-70/ 71-12.68/ 14.86

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 MANHOLE REMOVED EACH 01/NHS/PV	01/NHS/PV	202 CATCH BASIN REMOVED EACH 01/NHS/PV	01/NHS/PV	05/NHS/OT/COL	202 INLET REMOVED EACH 01/NHS/PV	01/NHS/PV	05/NHS/OT/COL
DR-45	294	4187+50.80 (I-70 EB)		LT						1		
DR-48	348	5062+10.63 (RAMP C5)		RT	1							
DR-50	310	264+59.26 (I-71 NB)		LT	1							
DR-51	287	4173+76.75 (I-70 EB)		RT			1					
DR-52	354	5078+05.54 (RAMP C5)		RT			1					
DR-53	287	4175+60.00 (I-70 EB)		RT						1		
DR-54	289	4179+75.54 (I-70 EB)		LT						1		
DR-55	292	4184+35.94 (I-70 EB)		LT						1		
DR-56	292	4184+77.97 (I-70 EB)		RT						1		
DR-57	374	203+29.88 (LIVINGSTON AVE.)		LT	1							
DR-58	374	203+84.62 (LIVINGSTON AVE.)		RT						1		
DR-59	375	204+36.24 (LIVINGSTON AVE.)		LT								1
DR-60	316	258+45.50 (I-71 NB)		RT			1					
DR-61	340	5041+96.43 (RAMP C5)		RT			1					
DR-62	370	19+24.54 (FULTON ST.)		LT			1					
DR-63	370	19+32.14 (FULTON ST.)		RT	1							
DR-64	370	19+35.51 (FULTON ST.)		RT						1		
DR-65	370	19+57.65 (FULTON ST.)		RT			1					
DR-66	370	20+08.57 (FULTON ST.)		RT	1							
DR-67	368	151+24.52 (FRONT ST.)		LT						1		
DR-72	292	4185+49.08 (I-70 EB)		LT			1					
DR-73	289	4177+39.36 (I-70 EB)		LT						1		
DR-76	298	4200+54.01 (I-70 EB)		RT						1		
DR-77	298	4201+52.67 (I-70 EB)		RT						1		
DR-78	300	4202+53.27 (I-70 EB)		RT						1		
DR-79	374	201+11.75 (LIVINGSTON AVE.)		RT						1		
DR-80	374	201+54.54 (LIVINGSTON AVE.)		RT						1		
DR-300	375	206+09.66 (LIVINGSTON AVE.)		RT					1			
DR-301	370	19+37.90 (FULTON ST.)		LT	1							
D-350	348	5061+19.30 (RAMP C5)		RT	1							
D-351	335	5030+41.57 (RAMP C5)		RT	1							
D-352	271	134+14.52 (I-70 EB)		RT						1		
D-353	292	4182+95.83 (I-70 EB)		LT	1							
D-354	371	21+62.24 (FULTON ST.)		LT	1							
TOTALS CARRIED TO SUBSUMMARY SHEET 219					4	6	3	4	1	7	8	1

CALCULATED JMB
CHECKED CWL

ESTIMATED QUANTITIES

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

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ESTIMATED QUANTITIES

CALCULATED JMB
CHECKED CWL

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	601 TIED CONCRETE BLOCK MAT, TYPE 1 SY 01/NHS/PV		601 TIED CONCRETE BLOCK MAT, TYPE 2 SY 01/NHS/PV		601 ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY 01/NHS/PV		601 PAVED GUTTER, TYPE 1-2, A.P.P. FT 01/NHS/PV		601 CONCRETE SLOPE PROTECTION SY 01/NHS/PV		660 SODDING UNSTAKED SY 01/NHS/PV		670 DITCH EROSION PROTECTION SY 01/NHS/PV	
E-1	327 - 329	3003+98.70 (RAMP C3)	3007+01.77 (RAMP C3)	RT							128	162			21	27		
E-2	340	5040+50.00 (RAMP C5)	5043+00.18 (RAMP C5)	RT	98	125												
E-3	310	264+05.07 (I-7 1NB)	266+00.00 (I-71 NB)	RT													70	89
E-8	312	269+50.00 (I-71 NB)	270+50.00 (I-71 NB)	LT													41	53
E-9	271	132+16.97 (I-70 EB)	134+67.11 (I-70 EB)	RT													92	117
E-10	292	4184+01.09 (I-70 EB)	4186+00.70 (I-70 EB)	LT													74	94
E-11	279	4155+71.25 (I-70 EB)		RT			1	2	1.1	1.4								
E-12	329	3008+41.83 (RAMP C3)		RT			1	1	0.8	1								
E-14	308 - 310	262+50.00 (I-71 NB)	264+00.00 (I-71 NB)	LT													56	72
E-15	318 - 320	5010+00.00 (RAMP A5)	5011+50.00 (RAMP A5)	RT													55	70
E-16	285 - 287	4171+47.04 (I-70 EB)	4173+00.03 (I-70 EB)	RT													55	70
E-17	287	4173+61.43 (I-70 EB)	4175+14.90 (I-70 EB)	RT													55	70
E-18	287	4175+14.90 (I-70 EB)	4176+11.60 (I-70 EB)	RT													35	44
E-19	281 - 283	4158+00.00 (I-70 EB)	4166+24.84 (I-70 EB)	RT													298	379
E-20	338 - 340	5039+50.00 (RAMP C5)	5040+50.00 (RAMP C5)	LT													37	47
E-21	308	261+00.00 (I-71 NB)	262+50.00 (I-71 NB)	RT													55	70
E-22	318	5006+50.00 (RAMP A5)	5008+50.00 (I-71 NB)	RT													73	92
E-23	320	5013+86.50 (RAMP A5)		RT			30	38										
E-24	312	268+50.00 (I-71 NB)	269+50.00 (I-71 NB)	LT			43	55										
E-25	340	5041+29.47 (RAMP C5)		RT			24	30										
E-26	320	5013+68.02 (RAMP A5)	5015+38.90 (RAMP A5)	LT							89	114			15	19		
E-27	320	5014+81.68 (RAMP A5)	5015+41.55 (RAMP A5)	RT							34	44			6	7		
E-28	312	269+50.00 (I-71 NB)		LT					0.6	0.7								
E-68	350	5068+89.91 (RAMP C5)	5069+50.00 (RAMP C5)	RT													22	28
E-69	318	5007+77 (RAMP A5)	5008+40 (RAMP A5)	RT									185	235				
E-70	320	5011+16 (RAMP A5)	5012+11 (RAMP A5)	RT									311	396				
E-71	310	265+92.37 (I-71 NB)	266+11.11 (I-71 NB)	RT			8	10										
TOTALS CARRIED TO SUBSUMMARY SHEET 221					98	125	107	136	3	3	251	320	496	631	42	53	1018	1295

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

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11/22/2021
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QQGTY81STD_USER

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	607 GATE, TYPE CLT, AS PER PLAN "B" EACH 01/NHS/PV	607 GATE, TYPE CLT, AS PER PLAN "B" EACH 01/NHS/PV	202 FENCE REMOVED FT 01/NHS/PV	202 FENCE REMOVED FT 01/NHS/PV	202 FENCE REMOVED FT 05/NHS/OT/COL	202 GATE REMOVED EACH 01/NHS/PV	202 GATE REMOVED EACH 01/NHS/PV	607 FENCE REMOVED AND REBUILT FT 01/NHS/PV	607 FENCE REMOVED AND REBUILT FT 01/NHS/PV	607 FENCE REMOVED AND REBUILT FT 05/NHS/OT/COL	607 FENCE, TYPE CLT FT 01/NHS/PV	607 FENCE, TYPE CLT FT 01/NHS/PV	607 FENCE, TYPE CLT, AS PER PLAN "A" FT 01/NHS/PV	607 FENCE, TYPE CLT, AS PER PLAN "A" FT 01/NHS/PV	607 GATE, TYPE CLT, AS PER PLAN "A" EACH 01/NHS/PV	607 GATE, TYPE CLT, AS PER PLAN "A" EACH 01/NHS/PV	607 FENCE, TYPE CLT, AS PER PLAN "B" FT 01/NHS/PV	607 FENCE, TYPE CLT, AS PER PLAN "B" FT 01/NHS/PV	607 TEMPORARY VANDAL FENCE, TYPE B FT 01/NHS/PV	607 TEMPORARY VANDAL FENCE, TYPE B FT 01/NHS/PV	607 FENCELINE SEEDING AND MULCHING FT 01/NHS/PV	607 FENCELINE SEEDING AND MULCHING FT 01/NHS/PV
F-1	375	207+02.79 (LIVINGSTON)	207+48.53 (LIVINGSTON)	LT										47											
F-2	370, 371	22+84.08 (FULTON)	23+15.00 (FULTON)	RT								18	23												
F-3	333, 335	5028+87.45 (RAMP C5)	5031+21.40 (RAMP C5)	RT											104.3	132.7								104.3	132.7
F-4	338	5038+16.04 (RAMP C5)	5038+35.66 (RAMP C5)	RT											12.8	16.2								12.8	16.2
F-5	348	5063+82.00 (RAMP C5)	5064+37.18 (RAMP C5)	RT											29.5	37.5								29.5	37.5
F-6	350, 352	5066+44.33 (RAMP C5)	5071+86.54 (RAMP C5)	RT													243.5	309.8	1					243.5	309.8
F-7	636 - 637	5+78.90 (BIKE DETOUR)	6+43.41 (BIKE DETOUR)	LT											33.6	42.8									
F-8	637	7+64.22 (BIKE DETOUR)	7+99.64 (BIKE DETOUR)	LT											14.9	18.9									
F-9	637	9+37.36 (BIKE DETOUR)	9+90.39 (BIKE DETOUR)	LT											16.1	20.5									
F-10	638	13+78.34 (BIKE DETOUR)	14+26.99 (BIKE DETOUR)	LT																	22.7	28.9			
F-11	638	14+26.99 (BIKE DETOUR)	14+50.99 (BIKE DETOUR)	LT	1																				
F-12	638	13+90.50 (BIKE DETOUR)	14+29.99 (BIKE DETOUR)	RT																			16.3	20.7	
F-13	638	14+29.99 (BIKE DETOUR)	14+53.99 (BIKE DETOUR)	RT		1																			
F-14	637-638	14+50.99 (BIKE DETOUR)	21+46.63 (BIKE DETOUR)	LT																	301.0	383.1			
F-15	637-638	14+53.99 (BIKE DETOUR)	21+46.63 (BIKE DETOUR)	RT																			308.5	392.6	
FR-1	374	4183+57.47 (I-70 EB)	202+62.79 (LIVINGSTON)	LT			154.4	196.6																	
FR-2	374, 375	203+45.92 (LIVINGSTON)	206+69.37 (LIVINGSTON)	LT					424																
FR-3	333, 335	5028+87.45 (RAMP C5)	5031+49.11 (RAMP C5)	RT			115.3	146.7																	
FR-4	335	5032+37.36 (RAMP C5)	5032+62.68 (RAMP C5)	RT			16.3	20.7																	
FR-5	338	5035+49.41 (RAMP C5)	5038+35.66 (RAMP C5)	RT			132.9	169.1																	
FR-6	348, 350	5063+82.00 (RAMP C5)	5068+70.72 (RAMP C5)	RT			288.2	366.8																	
FR-7	354	5078+96.43 (RAMP C5)	5079+22.43 (RAMP C5)	RT						1															
FR-8	356, 358	5082+30.80 (RAMP C5)	5086+25.12 (RAMP C5)	RT			261.9	333.3																	
FR-9	360	5086+71.74 (RAMP C5)	5087+84.37 (RAMP C5)	RT			71.1	90.5																	
FR-10	370, 371	19+37.95 (FULTON)	22+84.08 (FULTON)	RT			152.2	193.8																	
FR-11	368	150+74.18 (FRONT)	151+81.97 (FRONT)	LT			47.5	60.5																	
FR-12	304 - 312	252+86.40 (I-71 NB)	273+29.19 (I-71 NB)	RT			842.0	1071.7																	
FR-13	637	9+37.36 (BIKE DETOUR)	9+90.39 (BIKE DETOUR)	LT/RT			22.7	28.9																	
TOTALS CARRIED TO SUBSUMMARY SHEET 220					1	1	2105	2679	424	0	1	18	23	47	212	269	244	310	0	1	324	412	325	414	391	497

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED JMB
CHECKED CWL

ESTIMATED QUANTITIES

FRA-70/71-12.68/14.86

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11/22/2021
7:57:53 AM
QQGTY81STD_USER

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	606 GUARDRAIL, TYPE MGS FT 01/NHS/PV		606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH 01/NHS/PV		606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH 01/NHS/PV		606 ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016) EACH 01/NHS/PV		606 ANCHOR ASSEMBLY, MGS TYPE T EACH 01/NHS/PV		606 IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (50 MPH, 90" WIDTH) EACH 01/NHS/PV	606 IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (50 MPH, 48" WIDTH) EACH 01/NHS/PV		626 BARRIER REFLECTOR, TYPE 1, ONE-WAY EACH 01/NHS/PV		626 BARRIER REFLECTOR, TYPE 2, ONE-WAY EACH 01/NHS/PV	
G-1	331 - 335	5024+38.21 (RAMP C5)	5031+00.04 (RAMP C5)	RT	291.0	370.4	1															
G-2	327, 329	3004+33.90 (RAMP C3)	3009+00.00 (RAMP C3)	RT	201.6	256.6			1													
G-3	327, 329	3004+34.58 (RAMP C3)	3009+00.00 (RAMP C3)	LT	211.8	269.5																
G-4	281, 283	4157+86.17 (I-70 EB)	4166+36.81 (I-70 EB)	RT	357.3	454.8	1		1													
G-5	364	6005+64.05 (RAMP C6)	6010+65.38 (RAMP C6)	RT	219.8	279.7	1								1							
G-6	296, 298	4192+70.37 (I-70 EB)	4197+47.14 (I-70 EB)	RT	198.6	252.8	1		1													
G-7	285	4169+91.76 (I-70 EB)	4170+87.66 (I-70 EB)	RT	30	38.2	1		1													
G-8	304	251+94.88 (I-71 NB)	252+74.90 (I-71 NB)	RT	0	0	1				1											
G-9	308 - 312	260+73.65 (I-71 NB)	272+03.49 (I-71 NB)	LT	475.1	604.6	1				1											
G-10	310 - 312	265+50.32 (I-71 NB)	270+82.56 (I-71 NB)	RT	192.5	245	1				1											
G-11	318, 320	5008+46.34 (RAMP A5)	5015+10.25 (RAMP A5)	LT	263.9	335.9	1				1											
G-12	318, 320	5009+40.64 (RAMP A5)	5014+34.78 (RAMP A5)	RT	202.7	258	1						1									
G-13	338, 340	5039+05.43 (RAMP C5)	5041+41.61 (RAMP C5)	RT	104	132.4	1									1						
G-14	348 - 352	5062+40.43 (RAMP C5)	5070+83.69 (RAMP C5)	LT	375.6	478	1		1													
G-15	352, 354	5074+89.33 (RAMP C5)	5079+02.50 (RAMP C5)	LT	170.3	216.7	1															
G-16	292, 294	183+98.23 (I-70 WB)	187+65.80 (I-70 WB)	LT	148.5	189.0	1															
G-17	340	5040+39.70 (RAMP C5)	5041+43.00 (RAMP C5)	LT	22	28	1				1											
G-18	348	5061+71.78 (RAMP C5)	5063+52.40 (RAMP C5)	RT	67.0	85.3	1		1													
G-19	350, 352	5066+62.10 (RAMP C5)	5071+00.96 (RAMP C5)	RT	191.6	243.9	1		1													
G-20	342	58+64.62 (SR 315 NB)	59+61.98 (SR 315 NB)	RT	44	56							2									
G-21	340	62+11.25 (SR 315 SB)	62+85.54 (SR 315 SB)	LT	27.5	35			1				1									
G-22	364	6004+96.45 (RAMP C6)	6006+06.21 (RAMP C6)	RT	37.6	47.8	1		1													
G-23	292, 294	4183+86.93 (I-70 EB)	4191+59.53 (I-70 EB)	RT	331.1	421.4	1		1													
REFLECTORS																						
		G-1	G-2	RT															10		15	
		G-3		LT																	9	
		124+78.14 (I-70 EB)	128+26.37 (I-70 EB)	LT															4			
		G-17	5051+75.92 (RAMP C5)	LT															10		2	
		G-13	5051+59.23 (RAMP C5)	RT															10		3	
		G-8	5004+50.00 (RAMP A5)	RT															6		1	
		G-11	5017+37.12 (RAMP A5)	LT															5		10	
		G-12	5090+80.78 (RAMP C5)	RT															46		14	
		5017+25.79 (RAMP B5)	B-4	LT															15		10	
		G-15	5081+63.95 (RAMP C5)	LT															3		4	
		5084+20.00 (RAMP C5)	5090+82.09 (RAMP C5)	LT															13			
		G-5	4200+64.05 (I-70 EB)	RT															14		21	
		B-1		RT															11			
		G-9	272+50.00 (I-71 NB)	LT															2		17	
		G-10	B-3	RT															38		21	
		4148+49.95 (I-70 EB)	4167+27.87 (I-70 EB)	LT															19			
		B-2		LT															5			
		4174+06.00 (I-70 EB)	4197+00.00 (I-70 EB)	LT															14			
		G-20		RT																	2	
		G-21		RT																	2	
		B-5																	2		4	
		B-6																	6			
		OVERHEAD SIGN REPLACEMEMT																	7			
TOTALS CARRIED TO SUBSUMMARY SHEET 220					4164	5299	8	11	4	6		2	3	2	2	1	1		106	134	59	76

DATE 11-29-2021
REV. BY CWL
DESCRIPTION FUNDING CODE CHANGE
NO. 4

CALCULATED JMB
CHECKED CWL

ESTIMATED QUANTITIES

FRA-70/71-12.68/14.86

241
1815

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11/22/2021
8:01:28 AM
CQQTY81STD_USER

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE		202 GUARDRAIL REMOVED FT 01/NHS/PV					602 CONCRETE MASONRY CU YD 01/NHS/PV	01/NHS/PV									
GR-1	265-269	116+19.33 (I-70 EB)	127+29.69 (I-70 EB)	RT		486.89	619.67														
GR-2	269-271,329	127+96.30 (I-70 EB)	3009+00.00 (RAMP C3)	RT		504.97	642.68														
GR-3	327,329	3004+73.16 (RAMP C3)	3009+00.00 (RAMP C3)	RT		197.27	251.08														
GR-5	283	4163+42.26 (I-70 EB)	4166+34.90 (I-70 EB)	RT		127.46	162.23														
GR-6	285,287	4169+95.79 (I-70 EB)	4175+82.50 (I-70 EB)	RT		257.64	327.91														
GR-7	289	4177+06.29 (I-70 EB)	4181+58.12 (I-70 EB)	LT		199.27	253.61														
GR-8	292	4182+27.54 (I-70 EB)	4183+33.43 (I-70 EB)	LT/RT		48.92	62.26														
GR-9	292	4184+58.73 (I-70 EB)	4186+36.11 (I-70 EB)	LT/RT		78.44	99.84														
GR-10	296	4192+77.40 (I-70 EB)	4185+90.36 (I-70 EB)	RT		138.52	176.29														
GR-11	296,298	4196+71.88 (I-70 EB)	4198+00.27 (I-70 EB)	RT		56.56	71.99														
GR-12	306	254+99.31 (I-71 NB)	256+63.94 (I-71 NB)	RT		72.29	92.01														
GR-13	312,314	270+06.97 (I-71 NB)	273+05.40 (I-71 NB)	RT		132.77	168.99														
GR-14	320	5011+28.86 (RAMP A5)	5015+10.28 (RAMP A5)	RT		153.51	195.37														
GR-15	312	269+14.68 (I-71 NB)	268+34.80 (I-71 NB)	LT/RT		148.68	189.24														
GR-16	275,277	44+98.23 (RAMP B5)	148+54.11 (I-70 EB)	LT		154.87	197.11														
GR-20	342	5045+89.37 (RAMP C5)	5046+01.82 (RAMP C5)	LT/RT		53.62	68.25														
HW-3	329	3008+41.83 (RAMP C3)		RT							0.12	0.15									
HW-4	340	5041+42.01 (RAMP C5)		LT							0.12	0.15									
HW-61	312	269+50.00 (I-71 NB)		LT							0.12	0.15									
HW-108	279	5060+60.37 (RAMP C5)		LT							0.26	0.34									
HW-263	320	5011+97.96 (RAMP A5)		LT							0.12	0.15									
HW-266	320	5014+00.00 (RAMP A5)		RT							0.12	0.15									
TOTALS CARRIED TO SUBSUMMARY SHEET 219,222						2812	3579				0.9	1.1									

CALCULATED JMB
CHECKED CWL

ESTIMATED QUANTITIES

FRA-70/71-12.68/14.86

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

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11/22/2021
8:26:52 AM
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ESTIMATED QUANTITIES

CALCULATED JMB
CHECKED CWL

FRA-70/71-12.68/14.86

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	611 12" CONDUIT, TYPE B FT		611 15" CONDUIT, TYPE B FT		611 15" CONDUIT, TYPE B, 706.02 FT		611 15" CONDUIT, TYPE B, 706.02 WITH 706.11 JOINTS FT		611 15" CONDUIT, TYPE B, AS PER PLAN FT		611 15" CONDUIT, TYPE C FT		611 15" CONDUIT, TYPE C, AS PER PLAN FT		611 18" CONDUIT, TYPE B FT		611 18" CONDUIT, TYPE C, AS PER PLAN FT		611 21" CONDUIT, TYPE B, 706.02 WITH 706.11 JOINTS FT		611 24" CONDUIT, TYPE B FT		611 24" CONDUIT, TYPE C FT		611 27" CONDUIT, TYPE C FT		611 36" CONDUIT, TYPE B, 706.02 FT		611 CONDUIT, BORED OR JACKED, AS PER PLAN, 42" CONDUIT, TYPE C, 748.06 (0.625" WALL THICKNESS) FT		837 LINER PIPE, 27" I.D., 707.12 FT	
				4	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV	01/NHS /PV	01/NHS/ PV
P-30	354	D-30	D-31	LT/RT							37	47																								
P-31	354	D-32	D-31	RT							25.5	32.5																								
P-32	354	D-33	D-32	RT							24.6	31.4																								
P-33	354	D-259	D-33	RT																			15	19												
P-35	354	D-35	D-33	LT/RT																			21.1	26.9												
P-36	287	D-35	D-36	RT											92.8	118.2																				
P-37	287	D-37	D-36	LT/RT			46.6	59.4																												
P-38	354	D-42	D-38	RT																											87.6	111.4				
P-41	350,352	D-101	D-41	RT																											141.7	180.3				
P-42	352	D-41	D-42	RT																															162.4	206.6
P-42A	352	5071+45.14 (RAMP C5)	5074+38.65 (RAMP C5)	RT																													128.5	163.5		
P-42B	354	D-42	EX-4	RT													4.8	6.2																		
P-43	356	D-43	D-44	LT							69.1	87.9																								
P-44	289	D-190	D-44	RT							5.3	6.7																								
P-45	356	D-43	D-45	LT/RT							16.3	20.7																								
P-50	281	D-50	D-262	RT			14.5	18.5																												
P-50A	281	AB-27	D-50	RT									7	9																						
P-51	283	D-51	D-52	RT											4.8	6.2																				
P-52	310	D-229	263+90.46 (I-71 NB)	RT																													4.4	5.6		
P-53	285	D-53	D-54	RT			13.2	16.8																												
P-54	285	D-54	D-55	LT											3.1	3.9																				
P-55	364	D-55	D-261	LT/RT			23.8	30.2																												
P-56	292	D-157	D-56	LT																							6.6	8.4								
P-56A	292	D-56	4185+91.26 (I-70 EB)	LT					2.2	2.8																										
P-57	292	AB-4	D-57	RT									27.3	34.7																						
P-58	292,294	D-57	D-58	RT			39.6	50.4																												
P-59	294	D-58	D-59	RT			23.8	30.2																												
P-60	294	D-60	4189+90.67 (I-70 EB)	RT	4.4	5.6																														
P-61	312	D-61	HW-61	LT/RT																	49.7	63.3														
P-62	312	D-61	D-62	RT			44	56																												
P-63	312	D-62	D-63	RT			27.3	34.7																												
P-64	310	D-64	265+52.70 (I-71 NB)	LT													4.8	6.2																		
P-65	310	D-237	D-64	LT																													43.6	55.4		
P-66	281	D-66	D-113	RT			26	33																												
P-67	350	D-101	D-67	RT											3.5	4.5																				
P-68	350	D-67	D-68	RT											38.7	49.3																				
P-69	348	D-70	D-69	RT							27.7	35.3																								
P-70	348	D-113	D-70	LT/RT							43.6	55.4																								
P-71	342	D-71	AB-50	RT																			12.3	15.7												
TOTALS CARRIED TO SUBSUMMARY SHEET 222, 223					4	6	259	329	2	3	249	317	34	44	143	182	10	12	50	63	12	16	36	46	7	8	44	55	229	292	4	6	128	164	162	207

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	611 12" CONDUIT, TYPE C FT 01/NHS/PV	12" CONDUIT, TYPE C FT 01/NHS/PV	611 15" CONDUIT, TYPE B FT 01/NHS/PV	15" CONDUIT, TYPE B FT 01/NHS/PV	611 15" CONDUIT, TYPE B, 706.02 FT 01/NHS/PV	15" CONDUIT, TYPE B, 706.02 FT 01/NHS/PV	611 15" CONDUIT, TYPE B, 706.02 WITH 706.11 JOINTS FT 01/NHS/PV	15" CONDUIT, TYPE B, 706.02 WITH 706.11 JOINTS FT 01/NHS/PV	611 15" CONDUIT, TYPE B, AS PER PLAN FT 01/NHS/PV	15" CONDUIT, TYPE B, AS PER PLAN FT 01/NHS/PV	611 15" CONDUIT, TYPE C FT 01/NHS/PV	15" CONDUIT, TYPE C FT 01/NHS/PV	611 15" CONDUIT, TYPE C, 706.02 WITH 706.11 JOINTS FT 01/NHS/PV	15" CONDUIT, TYPE C, 706.02 WITH 706.11 JOINTS FT 01/NHS/PV	611 15" CONDUIT, TYPE C, AS PER PLAN FT 01/NHS/PV	15" CONDUIT, TYPE C, AS PER PLAN FT 01/NHS/PV	611 18" CONDUIT, TYPE B FT 01/NHS/PV	18" CONDUIT, TYPE B FT 01/NHS/PV	611 24" CONDUIT, TYPE B FT 01/NHS/PV	24" CONDUIT, TYPE B FT 01/NHS/PV	611 27" CONDUIT, TYPE B FT 01/NHS/PV	27" CONDUIT, TYPE B FT 01/NHS/PV	611 27" CONDUIT, TYPE C FT 01/NHS/PV	27" CONDUIT, TYPE C FT 01/NHS/PV	611 30" CONDUIT, TYPE C FT 01/NHS/PV	30" CONDUIT, TYPE C FT 01/NHS/PV	611 36" CONDUIT, TYPE B, 706.02 FT 01/NHS/PV	36" CONDUIT, TYPE B, 706.02 FT 01/NHS/PV	611 18" CONDUIT, TYPE B, 748.01 CLASS 52, AS PER PLAN FT 01/NHS/PV	18" CONDUIT, TYPE B, 748.01 CLASS 52, AS PER PLAN FT 01/NHS/PV
P-100	352	D-100	D-41	RT											36.1	45.9																		
P-101	350	D-111	D-101	LT/RT																					57.2	72.8								
P-104	281	D-104	D-113	RT			29.5	37.5																										
P-108	279	D-108	HW-108	RT																											18	23		
P-110	281	D-113	D-110	RT																											52.8	67.2		
P-111	281,283	D-262	D-111	RT																							82.7	105.3						
P-111A	283	AB-3	D-111	RT									15	19																				
P-112	283	D-111	D-52	RT											132.9	169.1																		
P-113	279,281	D-108	D-113	RT																											101.6	129.4		
P-114	348	D-104	D-114	LT/RT			37	47																										
P-154	294	D-154	D-254	LT			3.5	4.5																										
P-155	294	D-155	D-255	LT			3.1	3.9																										
P-157	292	D-302	D-157	LT																														
P-159	354	D-38	D-159	RT	44	56																												
P-160	289	D-160	D-332	LT																														
P-161	289	D-161	D-165	LT			51	65																										
P-162	292,294	D-162	EX-2	LT									76	96																				
P-165	289	D-165	AB-5	LT									14.5	18.5																				
P-165A	289	D-165	178+39.87 (I-70 EB)	LT			3.5	4.5																										
P-188	292	DJ-11	D-188	LT/RT																														
P-189	289,292	D-189	D-188	RT																														
P-190	289	D-190	D-189	RT																														
P-191	292	D-191	DJ-11	LT			21.6	27.4																										
P-192	289	D-192	D-160	LT			2.6	3.4																										
P-201	335	D-201	DJ-6	RT											20.7	26.3																		
P-202	335	DJ-6	D-202	RT											30.4	38.6																		
P-204	335	D-208	D-204	RT							13.2	16.8																						
P-205	269	D-210	D-205	LT			13.2	16.8																										
P-206	269	D-207	D-206	LT			7.5	9.5																										
P-207	269	D-209	D-207	LT			6.6	8.4																										
P-208	335	D-207	D-208	LT/RT							18.9	24.1																						
P-209	269	D-210	D-209	LT/RT			26	33																										
P-210	269	D-211	D-210	LT											7.5	9.5																		
P-211	269	EX-3	D-211	LT															6.6	8.4														
P-212	269,271	D-217	D-212	RT											52.8	67.2																		
P-213	327,329	D-213	D-214	RT													69.5	88.5																
P-214	329	D-214	D-215	RT													55.4	70.6																
P-215	329	D-215	HW-3	RT											31.2	39.8																		
P-216	340	D-216	HW-4	LT											12.3	15.7																		
P-217	269	D-217	130+96.19 (I-70 EB)	RT					2.2	2.8																								
P-220	306	D-220	D-222	RT			114	145																										
P-222	306,308	D-222	D-223	RT			81.4	103.6																										
P-223	316	D-223	5004+57.16 (RAMP A5)	RT																													5.3	6.7
P-223A	316	D-223	258+47.78 (I-71 NB)	RT					3.5	4.5																								
P-224	281	D-224	D-66	RT			7.9	10.1																										
P-225	316,318	D-223	D-225	RT																														
P-229	310	D-229	263+92.78 (I-71 NB)	RT																													4.4	5.6
TOTALS CARRIED TO SUBSUMMARY SHEET 222					44	56	408	520	6	7	32	41	105	134	324	412	125	159	7	8	308	391	90	115	57	73	83	105	172	220	4	6	5	7

CALCULATED JMB CHECKED CWL

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

ESTIMATED QUANTITIES

FRA-70/71-12.68/14.86

244
1815

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ESTIMATED QUANTITIES

CALCULATED JMB | CHECKED CWL

FRA-70/71-12.68/14.86

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	SPECIAL: CITY OF COLUMBUS 12" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL	611: 15" CONDUIT, TYPE B	611: 15" CONDUIT, TYPE B, AS PER PLAN	611: 15" CONDUIT, TYPE C	611: 18" CONDUIT, TYPE C	611: 21" CONDUIT, TYPE B	611: 21" CONDUIT, TYPE B, 706.02 WITH 706.11 JOINTS	611: 21" CONDUIT, TYPE C	611: 24" CONDUIT, TYPE B	611: 24" CONDUIT, TYPE B, AS PER PLAN	611: 24" CONDUIT, TYPE C	611: 30" CONDUIT, TYPE C	611: 36" CONDUIT, TYPE B	611: CONDUIT, BORED OR JACKED, 42" TYPE B, 748.06	SPECIAL: CITY OF COLUMBUS 8" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL
				4	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
					01/NHS/PV	01/NHS/PV	05/NHS/OT/COL	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV
P-230	310	D-236	D-230	LT												109.6	139.4													
P-232	308,310	D-232	D-229	RT						128.9	164.1																			
P-234	318	D-225	D-234	RT				153.1	194.9																					
P-235	310	D-229	D-235	RT						4.8	6.2																			
P-236	310	D-64	D-236	LT																				41.8	53.2					
P-237	310	D-229	D-237	LT/RT																				51.9	66.1					
P-238	310	D-237	264+57.68 (I-71 NB)	LT						3.5	4.5																			
P-239	310	D-239	D-237	LT						27.3	34.7																			
P-254	292,294	D-56	D-254	LT														50.6	64.4											
P-255	294	D-254	D-255	LT										33.4	42.6															
P-257	292	D-257	DJ-11	LT/RT																							55.4	70.6			
P-257A	292	D-257	DJ-11	LT/RT																									55.4	70.6	
P-258	292	D-257	D-258	LT								47.1	59.9																	
P-259	354	D-259	D-38	RT												8.4	10.6													
P-261	285,287	D-261	D-35	RT				88	112																					
P-262	281	D-110	D-262	RT																						61.2	77.8			
P-263	320	D-263	HW-263	RT						84.5	107.5																			
P-264	320	D-266	D-264	RT						14.5	18.5																			
P-265	320	D-265	D-266	RT						21.6	27.4																			
P-266	320	D-266	HW-266	RT						22.4	28.6																			
P-267	287	D-267	AB-2	LT/RT					24.6	31.4																				
P-268	292	D-258	D-268	LT								66	84																	
P-299	292	D-268	D-299	LT				23.8	30.2																					
P-300	292	D-300	D-301	LT				38.7	49.3																					
P-300A	292	EX-8	D-300	LT						6.2	7.8																			
P-301	292	D-301	D-326	LT				3.5	4.5																					
P-302	292	EX-2	D-302	LT																										
P-303	374	202+80.15 (LIVINGSTON)	D-312	LT/RT																										24.6	31.4
P-304	374	203+40.77 (LIVINGSTON)	D-312	LT/RT																										7.5	9.5
P-305	374,375	D-312	D-305	RT			78.0																							
P-306	374	D-306	200+70.63 (LIVINGSTON)	RT	1.8	2.2																								
P-307	375	D-305	D-307	RT			11.0																							
P-308	374,375	D-308	D-307	RT			25.0																							
P-309	374	D-309	D-342	RT	2.2	2.8																								
P-310	374	D-310	D-342	RT	14.5	18.5																								
P-311	374	D-311	D-341	RT	4	6																								
P-312	374	D-312	203+33.91 (LIVINGSTON)	RT				3.5	4.5																					
P-313	371	D-314	D-313	RT	41.8	53.2																								
P-314	370,371	D-315	D-314	RT	38.3	48.7																								
P-315	370	D-317	D-315	RT	31.2	39.8																								
P-317	370	D-318	D-317	LT/RT	27.3	34.7																								
TOTALS CARRIED TO SUBSUMMARY SHEET 222, 223					161	206	114	311	395	31	39	308	391	113	144	33	43	8	11	110	139	51	64	4	6	94	119	61	78	55	71	55	71	32	41

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

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ESTIMATED QUANTITIES

CALCULATED JMB | CHECKED CWL

FRA-70/71-12.68/14.86

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 PIPE REMOVED, 24" AND UNDER FT 01/NHS/PV	202 PIPE REMOVED, 24" AND UNDER FT 01/NHS/PV	202 PIPE REMOVED, OVER 24" FT 01/NHS/PV	202 PIPE REMOVED, OVER 24" FT 01/NHS/PV	611 12" CONDUIT, TYPE B FT 01/NHS/PV	611 12" CONDUIT, TYPE B FT 01/NHS/PV	611 12" CONDUIT, TYPE B, 706.02 FT 01/NHS/PV	611 12" CONDUIT, TYPE B, 706.02 FT 01/NHS/PV	611 15" CONDUIT, TYPE B FT 01/NHS/PV	611 15" CONDUIT, TYPE B FT 01/NHS/PV	611 15" CONDUIT, TYPE B, 706.02 FT 01/NHS/PV	611 15" CONDUIT, TYPE B, 706.02 FT 01/NHS/PV	611 15" CONDUIT, TYPE B, AS PER PLAN FT 01/NHS/PV	611 15" CONDUIT, TYPE B, AS PER PLAN FT 01/NHS/PV	611 18" CONDUIT, TYPE B FT 01/NHS/PV	611 18" CONDUIT, TYPE B FT 01/NHS/PV	611 18" CONDUIT, TYPE C FT 01/NHS/PV	611 18" CONDUIT, TYPE C FT 01/NHS/PV	SPECIAL CITY OF COLUMBUS 12" PIPE, 706.02 WITH 706.11 JOINTS, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL FT 01/NHS/PV	SPECIAL CITY OF COLUMBUS 12" PIPE, 706.02 WITH 706.11 JOINTS, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL FT 01/NHS/PV	SPECIAL CITY OF COLUMBUS 12" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL FT 01/NHS/PV	SPECIAL CITY OF COLUMBUS 12" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL FT 01/NHS/PV	SPECIAL CITY OF COLUMBUS 12" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL FT 05/NHS/OT/COL	SPECIAL CITY OF COLUMBUS 15" PIPE, 706.02 WITH 706.11 JOINTS, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL FT 01/NHS/PV	SPECIAL CITY OF COLUMBUS 15" PIPE, 706.02 WITH 706.11 JOINTS, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL FT 01/NHS/PV	SPECIAL CITY OF COLUMBUS 6" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL FT 01/NHS/PV	SPECIAL CITY OF COLUMBUS 6" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL FT 01/NHS/PV
P-318	370	D-319	D-318	RT																			29	37								
P-318A	370	D-318	AB-29	LT																			3.5	4.5								
P-319	370	D-319	D-320	RT																			7.5	9.5								
P-320	368	D-321	D-320	LT/RT																									24.6	31.4		
P-321	292	D-268	D-321	LT															37	47												
P-322	368	D-320	D-322	RT																			15	19								
P-323	368	D-321	D-323	LT																			16.3	20.7								
P-326	292	D-326	D-302	LT									38.3	48.7																		
P-327	370	D-315	DJ-326	RT																					22.9	29.1						
P-328	292	D-328	185+75.35 (I-70 WB)	LT																	1.8	2.2										
P-329	298	D-329	D-330	RT					30.4	38.6																						
P-330	298	D-330	4201+66.63 (I-70 EB)	RT											7	9																
P-331	300	D-331	4202+45.34 (I-70 EB)	RT							3.5	4.5																				
P-332	292	D-332	DJ-11	LT															42.2	53.8												
P-333	306	D-220	D-333	RT									1.8	2.2																		
P-334	316	D-334	D-223	RT									4	5																		
P-340	375	DJ-300	D-340	RT																								29.0				
P-341	374	D-341	D-306	RT																					17.2	21.8						
P-342	374	D-342	D-306	RT																					16.3	20.7						
P-350	289	AB-5	D-160	LT													47.5	60.5														
P-351	289	D-161	177+22.82 (I-70 EB)	LT							3.5	4.5																				
P-360	374	202+58.62 (LIVINGSTON)	D-312	LT/RT																											33.4	42.6
P-361	374,375	203+94.03 (LIVINGSTON)	D-305	LT/RT																											10.1	12.9
P-500	287	D-267	EX-6	LT													19.8	25.2														
P-501	287	D-267	174+97.70 (I-70 EB)	LT					3.5	4.5																						
P-502	287	AB-2	D-36	RT													26.8	34.2														
PR-1	283	AB-3	4162+98.68 (I-70 EB)	RT	11	14																										
PR-2	287	DR-53	DR-2	RT	16.3	20.7																										
PR-3	287	DR-3	DR-4	RT	75.7	96.3																										
PR-4	287	DR-4	DR-5	RT	6.6	8.4																										
PR-5	287	DR-5	O.S.I.S.	RT	26.4	33.6																										
PR-6	289,292	DR-6	DJ-11	LT	53.7	68.3																										
PR-7	292	DJ-11	DR-7	LT/RT	19.8	25.2																										
PR-8	292	DR-9	DR-8	RT	22.4	28.6																										
PR-9	292	EX-2	DR-9	LT/RT	33.9	43.1																										
PR-10	287	DR-2	O.S.I.S.	RT	14.1	17.9																										
PR-12	292	DR-13	4184+77.97 (I-70 EB)	RT	24.2	30.8																										
PR-13	269	DR-17	DR-19	LT/RT	30.4	38.6																										
PR-15	269	DR-18	DR-17	LT	4.4	5.6																										
PR-16	269	DJ-1	DR-18	LT	5.3	6.7																										
PR-17	269	DR-15	130+96.19 (I-70 EB)	RT	2.2	2.8																										
PR-18	335	5030+08.06 (RAMP C5)	5032+04.54 (RAMP C5)	RT			86.2	109.8																								
PR-19	316	DR-60	5004+57.16 (RAMP A5)	RT	3.1	3.9																										
PR-20	356	DR-22	5080+50.64 (RAMP C5)	RT	15.4	19.6																										
PR-22	310	DR-25	DR-50	LT	21.6	27.4																										
PR-23	310	DR-25	DR-26	LT/RT	37	47																										
PR-24	310	DR-26	263+90.46 (I-71 NB)	RT			3.5	4.5																								
PR-25	310	DR-26	263+92.78 (I-71 NB)	RT			3.5	4.5																								
PR-26	318	DR-23	5006+26.89 (RAMP A5)	RT	16	21																										
TOTALS CARRIED TO SUBSUMMARY SHEET 219, 222, 223					440	559	93	119	34	43	7	9	44	56	7	9	94	120	79	101	2	2	71	91	56	72	29	25	31	44	55	

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE		202 PIPE REMOVED, 24" AND UNDER FT 01/NHS/PV			202 REMOVAL MISC.: BENCH REMOVED AND RESET EACH 05/NHS/OT/COL		202 REMOVAL MISC.: BOLLARDS EACH 01/NHS/PV		202 REMOVAL MISC.: ROCK ART MONOLITH EACH 01/NHS/PV		202 REMOVAL MISC.: LIGHT POLE EACH 01/NHS/PV		202 REMOVAL MISC.: WOOD POLE EACH 01/NHS/PV					
PR-38	316	DR-60	5004+58.16 (RAMP A5)	RT		5.3	6.7																
PR-39	306,308	DR-37	DR-60	RT		38.7	49.3																
PR-40	316	DR-60	DR-40	RT		11	14																
PR-41	318	DR-23	DR-24	RT		64.2	81.8																
PR-42	348	DJ-5	DR-48	RT		44	56																
PR-51	287	DR-51	DR-3	RT		10.1	12.9																
PR-52	354	DR-3	DR-52	LT/RT		28.2	35.8																
PR-53	287	EX-6	DR-53	LT		32.6	41.4																
PR-54	289	AB-5	DR-54	LT		56.3	71.7																
PR-55	292	DJ-11	DR-55	LT		59.8	76.2																
PR-61	340	DR-61	5043+00.18 (RAMP C5)	RT		46.2	58.8																
PR-62	370	DR-62	DR-63	LT/RT		11.4	14.6																
PR-64	370	DR-63	DR-64	RT		4	5																
PR-65	370	DR-64	DR-65	RT		9.7	12.3																
PR-66	370	DR-63	DR-66	RT		31.7	40.3																
PR-67	370	DR-67	DR-63	LT/RT		37.4	47.6																
PR-68	370,371	DR-66	DJ-326	LT/RT		66	84																
PR-70	370	DR-70	DR-63	LT/RT		70.4	89.6																
PR-71	370	AB-29	DR-66	LT/RT		14.5	18.5																
PR-72	289	DR-73	AB-5	LT		44	56																
PR-73	368	DR-57	148+60.41 (FRONT)	RT		5.7	7.3																
PR-74	374	DR-57	DR-58	RT		23.8	30.2																
PR-75	374,375	DR-58	DR-59	RT		26	33																
PR-76	298	DR-76	DR-77	RT		42.2	53.8																
PR-77	375	EX-300	DR-300	RT		11	14																
PR-78	292	DR-72	4185+54.02 (I-70 EB)	LT		5.7	7.3																
PR-90	287	AB-2	DR-53	RT		22.9	29.1																
PR-91	289	4178+36.08 (I-70 EB)	AB-5	LT		18	23																
PR-92	289	4177+18.17 (I-70 EB)	DR-73	LT		22.4	28.6																
PR-93	354	5075+07.72 (RAMP C5)	EX-4	LT/RT		22.0	28.0																
PR-215	329	DR-21	HW-3	RT		30.4	38.6																
PR-267	287	4174+97.74 (I-70 EB)	AB-2	LT/RT		33.9	43.1																
PR-300	292	EX-8	DR-55	LT		34.8	44.2																
PR-306	374	DR-56	200+70.63 (LIVINGSTON)	LT/RT		16	21																
PR-307	374	DR-80	DR-79	RT		16.7	21.3																
PR-308	374	DR-79	DR-14	LT/RT		17.2	21.8																
R-1	374	202+27.26 (LIVINGSTON AVE)		RT							4												
R-2	375	204+07.19 (LIVINGSTON AVE)		RT					1														
R-3	350	5066+83.42 (RAMP C5)		RT											1								
R-4	350	5067+04.15 (RAMP C5)		RT									1										
R-5	350	5068+06.83 (RAMP C5)		RT									1										
R-6	350	5068+77.48 (RAMP C5)		RT											1								
R-7	348	5064+84.69 (RAMP C5)		LT											1								
R-8	352	5073+11.59 (RAMP C5)		LT													1						
R-9	352	5073+84.39 (RAMP C5)		RT													1						
TOTALS CARRIED TO SUBSUMMARY SHEET 219						1034	1317		1		4		2		3		2						

CALCULATED JMB
CHECKED CWL

ESTIMATED QUANTITIES

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

FRA-70/71-12.68/14.86

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 PIPE REMOVED, 24" AND UNDER FT 01/NHS/PV	202 MANHOLE REMOVED (SANITARY) EACH 01/NHS/PV			SPECIAL CITY OF COLUMBUS MANHOLE, TYPE C (AA-S102) EACH 01/NHS/PV	SPECIAL CITY OF COLUMBUS MANHOLE, TYPE C, AS PER PLAN (AA-S102) EACH 01/NHS/PV	611 MANHOLE ADJUSTED TO GRADE, AS PER PLAN (SANITARY) EACH 01/NHS/PV				SPECIAL CITY OF COLUMBUS 18" CONDUIT, C905 PIPE, WITH TYPE 1 BEDDING, WITH ITEM 912 COMPACTED GRANULAR MATERIAL FT 01/NHS/PV							
SA-1	903	11+31.18 (SHORT ST.)		LT					1											
SA-2	903	10+48.04 (SHORT ST.)		LT					1											
SA-3	904	4176+82.28 (I-70 EB)		RT					1											
SA-4	289	178+37.29 (I-70 EB)		RT						1										
SJ-3	335	5030+33.13 (RAMP C5)		RT							1									
SJ-10	372	12+05.79 (MOUND ST.)		LT							1									
SP-1	903	SA-1	SA-2	LT											84					
SP-2	903	SA-2	10+44.58 (SHORT ST.)	LT											27					
SP-3	904	SA-3	SJ-5	RT											93					
SR-1	903	10+67.93 (SHORT ST.)		LT		1														
SR-2	903	11+02.45 (SHORT ST.)		LT		1														
SR-3	903	11+33.92 (SHORT ST.)		LT		1														
SR-4	903	11+23.77 (SHORT ST.)		LT		1														
SR-5	903	11+31.55 (SHORT ST.)		LT		1														
SR-6	903	10+44.58 (SHORT ST.)	SR-1	LT	21															
SR-7	903	SR-1	SR-2	LT	33															
SR-8	903	SR-2	SR-8	LT	27															
SR-9	903	SR-5	SR-3	LT	7															
SR-10	903	SR-3	SA-1	LT	6															
SR-11	903	SR-4	SR-3	LT	15															
SR-12	903	SR-4	SR-5	LT	12															
SR-13	289	178+37.29 (I-70 EB)		RT		1														
TOTALS CARRIED TO SUBSUMMARY SHEET 219,224					121	6			3	1	2				204					

CALCULATED JMB
CHECKED CWL

SANITARY SEWER ESTIMATED QUANTITIES

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

FRA-70/71-12.68/14.86

248
1815

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UNDERDRAIN ESTIMATED QUANTITIES

FRA-70/71-12.68/14.86

250
1815

CALCULATED JMB
CHECKED CWL

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT 01/NHS/PV	605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT 01/NHS/PV	605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT 01/NHS/PV	605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT 01/NHS/PV	605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT 01/NHS/PV	605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT 01/NHS/PV	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT 01/NHS/PV	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT 01/NHS/PV	611 6" CONDUIT, TPYE B FT 01/NHS/PV	611 6" CONDUIT, TPYE B FT 01/NHS/PV	611 PRECAST REINFORCED CONCRETE OUTLET EACH 01/NHS/PV	611 PRECAST REINFORCED CONCRETE OUTLET EACH 01/NHS/PV	FOR INFORMATION ONLY 6" PLUG EACH	FOR INFORMATION ONLY 6" X 6" TEE EACH	FOR INFORMATION ONLY 6" X 6" CROSS EACH	FOR INFORMATION ONLY 6" 90° BEND EACH
U-1	677	5024+38.21 (RAMP C5)	OUTLET	RT	125.8	160.2					5.7	7.3	4.4	5.6	1		1	1	1	
U-2	677	5024+38.21 (RAMP C5)	U-1	RT					125.8	160.2							1			
U-3	677	5031+02.19 (RAMP C5)	U-1	RT					165	211							1			
U-4	677	5031+37.30 (RAMP C5)	U-1	RT	180.8	230.2											1	1		
U-6	677	5031+38.41 (RAMP C5)	D-202	RT					9.2	11.8	4.4	5.6					1			
U-7	677	126+97.68 (I-70 EB)	EXISTING UD	RT	44.9	57.1											1			
U-8	677	126+97.71 (I-70 EB)	EXISTING UD	LT					44.9	57.1							1			
U-9	677	126+97.73 (I-70 EB)	EXISTING UD	LT					44.9	57.1							1			
U-10	677	128+25.37 (I-70 EB)	D-210	LT			4.4	5.6									1			
U-11	677	128+40.00 (I-70 EB)	D-205	LT			6.6	8.4			4.4	5.6					1			
U-12	677	129+50.00 (I-70 EB)	D-205	LT					33.4	42.6	4.4	5.6					1			
U-13	677	129+50.00 (I-70 EB)	D-206	LT/RT					37.4	47.6			15.8	20.2			1	1		
U-14	677	128+26.37 (I-70 EB)	U-13	RT			17.2	21.8									1			
U-15	677	128+28.68 (I-70 EB)	D-209	RT			2.6	3.4									1			
U-16	677	129+50.00 (I-70 EB)	U-13	RT	37.4	47.6											1		1	
U-17	677	128+25.87 (I-70 EB)	U-13	LT			17.2	21.8									1			
U-18	677	128+40.00 (I-70 EB)	D-206	RT			6.6	8.4			4.4	5.6					1			
U-19	677	3004+93.21 (RAMP C3)	U-157	BL	268.4	341.6											1	1		
U-20	677	5039+68.62 (RAMP C3)	D-214	LT					105.6	134.4			11.9	15.1				1		1
U-21	677	5040+28.18 (RAMP C5)	U-300	BL	298.3	379.7											1			
U-22																				
U-23	677	3004+93.21 (RAMP C3)	U-158	RT					267.1	339.9			2.6	3.4			1			2
U-24	677	3007+17.85 (RAMP C3)	EXISTING UD	LT					81.4	103.6							1			
U-25	677	3004+93.21 (RAMP C3)	U-26	LT					26.4	33.6							1			
U-26	677	5041+57.96 (RAMP C5)	U-19	LT					111.3	141.7			11.4	14.6			1			1
U-43	677	266+98.35 (I-71 NB)	D-62	LT/RT					196.7	250.3			17.6	22.4			1	1	1	
U-44	677	266+98.47 (I-71 NB)	U-43	RT	187.4	238.6											1			
U-45	677	266+93.38 (I-71 NB)	D-235	RT					125	159	8.4	10.6					1			1
U-46	677	271+83.99 (I-71 NB)	D-62	RT					20.7	26.3	4.4	5.6					1			
U-47	677	5015+07.84 (RAMP A5)	OUTLET	LT					211.2	268.8	11.4	14.6			1		1			1
U-48	677	5015+06.59 (RAMP A5)	D-234	BL	223.1	283.9					9.2	11.8	3.5	4.5			1	1		1
U-49	677	5014+42.61 (RAMP A5)	U-48	RT					193.2	245.8							1			
U-50	677	5010+35.00 (RAMP A5)	U-52	LT					150.9	192.1							1			
U-51	677	5004+53.95 (RAMP A5)	U-193	RT					63.8	81.2							1			
U-52	677	264+00.12 (I-71 NB)	U-55	RT					137.7	175.3			4.8	6.2			1	1		2
U-53	677	5009+95.00 (RAMP A5)	U-332	RT					151.4	192.6							1			
U-54	677	263+95.00 (I-71 NB)	U-332	LT					156.6	199.4							1			
U-55	677	5006+94.28 (RAMP A5)	U-332	LT					19.8	25.2										
U-56	677	254+05.00 (I-71 NB)	D-334	RT					184.8	235.2	4.4	5.6					1			
U-57	677	253+53.06 (I-71 NB)	U-330	RT/BL	279.4	355.6											1			
U-58	677	266+93.56 (I-71 NB)	OUTLET	LT					132.4	168.6	4.8	6.2			1		1			1
U-59	678	5062+02.48 (RAMP C5)	D-70	RT					78.8	100.2	4.4	5.6					1			
U-60	678	5062+02.48 (RAMP C5)	U-61	RT	83.6	106.4											1			
TOTALS CARRIED TO SUBSUMMARY SHEET 222, 223					1730	2201	55	70	2876	3661	71	90	73	92	1	2				

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

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UNDERDRAIN ESTIMATED QUANTITIES

CALCULATED JMB | CHECKED CWL

FRA-70/71-12.68/14.86

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (FT) 01/NHS/PV	605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (FT) 01/NHS/PV	605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (FT) 01/NHS/PV	605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (FT) 01/NHS/PV	605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (FT) 01/NHS/PV	605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (FT) 01/NHS/PV	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS (FT) 01/NHS/PV	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS (FT) 01/NHS/PV	611 6" CONDUIT, TPYE B (FT) 01/NHS/PV	611 6" CONDUIT, TPYE B (FT) 01/NHS/PV	611 PRECAST REINFORCED CONCRETE OUTLET (EACH) 01/NHS/PV	611 PRECAST REINFORCED CONCRETE OUTLET (EACH) 01/NHS/PV	FOR INFORMATION ONLY 6" PLUG (EACH)	6" X 6" TEE (EACH)	6" X 6" CROSS (EACH)	6" 90° BEND (EACH)
U-61	678	5062+65.38 (RAMP C5)	D-70	LT					83.6	106.4			15	19			1	1	1	
U-62	678	5062+65.38 (RAMP C5)	OUTLET	LT					56.8	72.2	4.8	6.2			1		1			1
U-63	678	5071+09.38 (RAMP C5)	D-69	RT					279.4	355.6	4.4	5.6					1			
U-64	678	5071+18.62 (RAMP C5)	U-66	BL					57.6	73.4							1			1
U-65	678	6001+86.80 (RAMP C6)	U-61	LT					318.6	405.4							1			
U-66	678	5071+09.38 (RAMP C5)	U-61	RT	314.2	399.8											1	1		
U-67	678	5071+25.49 (RAMP C5)	D-100	RT							4.4	5.6					1			
U-68	678	5071+22.36 (RAMP C5)	D-100	RT					3.5	4.5			4.4	5.6			1			1
U-69	678	5071+07.85 (RAMP C5)	D-111	LT					152.7	194.3	5.7	7.3					1			1
U-70	678	5067+59.83 (RAMP C5)	U-62	LT					163.7	208.3							1			
U-71	678	5064+50.96 (RAMP C5)	D-70	RT					21.1	26.9	4.4	5.6					1			
U-72	678	4158+61.63 (I-70 EB)	EX-40	LT					16.7	21.3	3.1	3.9	1.3	1.7			1	1		
U-73	678	4166+17.74 (I-70 EB)	U-76	RT	225.3	286.7											1			
U-74	678	4166+05.79 (I-70 EB)	U-76	RT					219.1	278.9							1			
U-75	678	4166+21.70 (I-70 EB)	D-51	RT							4.4	5.6					1			
U-76	678	4158+01.56 (I-70 EB)	D-50	RT	137.3	174.7							10.6	13.4			1	1	1	
U-77	678	4165+98.74 (I-70 EB)	U-104	LT					222.2	282.8							1			
U-78	678	4158+01.44 (I-70 EB)	D-224	RT					2.2	2.8	4.4	5.6					1			
U-79	678	6007+78.50 (RAMP C6)	U-188	LT					110.0	140.0										
U-80	678	4174+15.31 (I-70 EB)	U-164	LT					158.4	201.6			1.3	1.7			1			2
U-81	678	4175+54.17 (I-70 EB)	D-37	LT			16.7	21.3									1			
U-82	678	4174+20.30 (I-70 EB)	U-188	RT					41.8	53.2							1			
U-83	678	4173+00.00 (I-70 EB)	D-54	RT					105.2	133.8							1			
U-84	678	4175+15.28 (I-70 EB)	U-164	BL					156.6	199.4							1			
U-85	678	4175+63.91 (I-70 EB)	U-188	BL			21.1	26.9									1			
U-86	678	4175+70.50 (I-70 EB)	U-188	RT			24.2	30.8									1			
U-87	678	4175+75.76 (I-70 EB)	U-188	RT			26.4	33.6									1			
U-88	678	4175+79.47 (I-70 EB)	U-188	RT			29.5	37.5									1			
U-89	678	5077+91.39 (RAMP C5)	U-94	LT			24.2	30.8												
U-90	678	5080+18.54 (RAMP C5)	U-93	RT	99.9	127.1											1			
U-91	678	5080+19.34 (RAMP C5)	U-93	RT					76.1	96.9							1			
U-92	678	5074+46.64 (RAMP C5)	D-259	RT					106.9	136.1	4.4	5.6					1			
U-93	678	5074+45.18 (RAMP C5)	D-32	RT	152.2	193.8							4	5			1	1	1	
U-94	678	5074+89.26 (RAMP C5)	D-35	LT					65.1	82.9	5.3	6.7						1		
U-95	678	6005+64.47 (RAMP C6)	D-261	RT					16.7	21.3	4.4	5.6					1			
U-96	678	4174+20.26 (I-70 EB)	D-37						42.7	54.3							1			
U-97	678	6004+82.50 (RAMP C6)	U-79	LT					131.1	166.9							1			
U-98	678	6005+02.85 (RAMP C6)	U-188	BL	230.6	293.4											1			
U-99	678	4170+03.33 (I-70 EB)	U-164	RT	25.1	31.9											1			
U-100																				
U-101	678	5077+05.00 (RAMP C5)	U-93	RT					37.8	48.2							1			
U-104	678	4161+01.00 (I-70 EB)	U-72	LT					89.8	114.2										
U-105	679	4177+06.19 (I-70 EB)	D-192	LT					103.4	131.6	4.4	5.6					1			
TOTALS CARRIED TO SUBSUMMARY SHEET 222, 223					1185	1508	143	181	2839	3614	55	69	37	47	1	0	38	6	3	6

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

UNDERDRAIN ESTIMATED QUANTITIES

FRA-70/71-12.68/14.86

CALCULATED JMB | CHECKED CWL

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT 01/NHS/PV	605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT 01/NHS/PV	605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC 01/NHS/PV	605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC 01/NHS/PV	605 4" BASE PIPE UNDERDRAINS FT 01/NHS/PV	605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT 01/NHS/PV	605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC 01/NHS/PV	611 4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT 01/NHS/PV	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT 01/NHS/PV	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS 01/NHS/PV	611 4" CONDUIT, TYPE B FT 01/NHS/PV	611 6" CONDUIT, TPYE B FT 01/NHS/PV	611 6" CONDUIT, TPYE B 01/NHS/PV	FOR INFORMATION ONLY 4" 90° BEND EACH	4" PLUG EACH	6" PLUG EACH	6" X 6" TEE EACH	6" X 6" CROSS EACH	6" 90° BEND EACH
U-106	679	4177+13.59 (I-70 EB)	U-109	LT	106	135											5.3	6.7			1			2
U-107	679	4177+20.89 (I-70 EB)	D-189	RT							167.2	212.8					17.6	22.4			1	2		1
U-108	679	4179+55.60 (I-70 EB)	D-191	LT							125.4	159.6		4.4	5.6						1			
U-109	679	4179+54.21 (I-70 EB)	D-191	LT	130.2	165.8											4.4	5.6			1			1
U-110	679	4177+30.09 (I-70 EB)	U-107	RT	162.8	207.2															1			
U-111	679	4177+32.31 (I-70 EB)	U-107	RT							161.9	206.1									1			
U-112	679	4208+14.66 (I-70 EB)	U-147	LT	291.7	371.3															1			
U-113	679	5084+57.16 (RAMP C5)	D-43	LT							120.6	153.4									1			
U-114	679	5081+72.76 (RAMP C5)	U-118	RT			8.8	11.2													1			
U-115	679	5081+73.65 (RAMP C5)	U-118	RT			8.8	11.2													1			
U-117	679	5085+53.99 (RAMP C5)	U-118	RT							160.6	204.4												
U-118	679	5086+03.90 (RAMP C5)	D-45	RT	183	233											4.0	5.0			1	1	1	
U-119	679	5086+29.61 (RAMP C5)	U-117	RT			34.8	44.2									2.6	3.4			1			2
U-120	679	4179+27.31 (I-70 EB)	D-189								71.7	91.3		4.4	5.6						1			
U-121	679	4181+05.32 (I-70 EB)	U-123	RT							101.2	128.8									1			2
U-122	679	4181+12.29 (I-70 EB)	D-188	RT							78.3	99.7		4.4	5.6						1			
U-123	679	4183+25.00 (I-70 EB)	D-57	RT							151.4	192.6												
U-124	679	4182+65.59 (I-70 EB)	D-157	LT							132.0	168.0		4.4	5.6						1			
U-125	679	4182+55.60 (I-70 EB)	D-254	LT	193.2	245.8								4.4	5.6						1			
U-126	679	4181+05.44 (I-70 EB)	U-155	RT							154.9	197.1					5.3	6.7			1			2
U-127	679	4208+14.66 (I-70 EB)	U-147	LT							291.7	371.3									1			
U-128	679	4185+90.59 (I-70 EB)	D-154	LT							45.3	57.7		4.4	5.6						1			
U-129	680	151+38.35 (FRONT)	U-222	LT/RT					83													1		
U-132	680	23+15.00 (FULTON)	D-318	LT					313				10									1		
U-134	680	21+05.59 (FULTON)	D-317	RT					54				10									1		
U-135	680	21+95.00 (FULTON)	D-315	RT					72				10									1		
U-136	680	22+90.01 (FULTON)	D-314	RT					80				10									1		
U-137	677	31+29.34 (SOUDER)	EXISTING UD	LT					50													1		
U-138	677	31+28.01 (SOUDER)	EXISTING UD	RT					50													1		
U-139	679	4186+72.94 (I-70 EB)	D-58	RT							33	42		4.4	5.6						1			
U-140	679	4188+05.06 (I-70 EB)	D-58	RT							17.2	21.8		4.4	5.6						1			
U-141	679	4187+10.10 (I-70 EB)	D-255	LT	26.8	34.2								4.4	5.6						1			
U-142	679	4189+94.29 (I-70 EB)	D-59	RT							77.4	98.6		4.4	5.6						1			
U-143	679	4193+97.50 (I-70 EB)	D-255	LT	264.9	337.1								4.4	5.6						1			
U-144	679	4205+28.94 (I-70 EB)	U-149	RT	166.8	212.2															1			
U-145	679	4205+28.94 (I-70 EB)	D-331	RT							117	149		4.4	5.6						1			
U-146	679	4194+02.50 (I-70 EB)	U-147	LT							330	420									1			
U-147	679	4194+02.50 (I-70 EB)	EX-30	LT	330	420											6.2	7.8			1	1	1	
U-148	679	4202+48.27 (I-70 EB)	D-330	RT							38.7	49.3		4.4	5.6						1			
U-149	679	4194+51.41 (I-70 EB)	D-330	RT	308	392											5.7	7.3			1	1		
U-150	679	4194+02.50 (I-70 EB)	D-329	RT							294.8	375.2		4.4	5.6						1			
U-151	679	4200+89.05 (I-70 EB)	D-330	RT							22.9	29.1		4.4	5.6						1			
U-154	680	23+15.00 (FULTON)	D-318	RT					323							22				1	1			
U-155	679	4184+57.04 (I-70 EB)	U-125	BL							73.9	94.1					10.6	13.4						1
TOTALS CARRIED TO SUBSUMMARY SHEET 222					2164	2754	53	67	1025		2768	3522	40	66	84	22	62	79		1	8	33	5	2	11

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT 01/NHS/PV	605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT 01/NHS/PV	605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FABRIC FT 01/NHS/PV	605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FABRIC FT 01/NHS/PV	605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT 01/NHS/PV	605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT 01/NHS/PV	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT 01/NHS/PV	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT 01/NHS/PV	611 6" CONDUIT, TPYE B FT 01/NHS/PV	611 6" CONDUIT, TPYE B FT 01/NHS/PV	FOR INFORMATION ONLY 4" PLUG EACH	FOR INFORMATION ONLY 4" X 4" TEE EACH	FOR INFORMATION ONLY 4" 90° BEND EACH	FOR INFORMATION ONLY 6" PLUG EACH	FOR INFORMATION ONLY 6" X 6" TEE EACH	FOR INFORMATION ONLY 6" X 6" CROSS EACH	FOR INFORMATION ONLY 6" 90° BEND EACH
U-156	677	5032+65.15 (RAMP C5)	U-304	LT			2.6	3.4										1			
U-157	677	5032+50.00 (RAMP C5)	U-302	RT			26.4	33.6													
U-158	677	5032+50.00 (RAMP C5)	U-302	RT			26.4	33.6													
U-159	677	5032+66.46 (RAMP C5)	U-303	RT			8.4	10.6										1			
U-160	677	5032+66.98 (RAMP C5)	U-303	RT			18	19										1			
U-164	678	4169+79.61 (I-70 EB)	D-54	LT/RT					31.7	40.3			31.7	40.3				1	1	2	
U-165	678	4169+93.98 (I-70 EB)	U-164	BL					29	37								1			
U-166	678	4170+05.70 (I-70 EB)	D-53	RT					6.6	8.4	4.4	5.6						1			
U-167	679	5071+86.95 (RAMP C5)	D-43	LT			8.4	10.6										1			
U-170	677	259+51.96 (I-71 NB)	U-332	LT			40	51													
U-180	678	4157+88.17 (I-70 EB)	D-66	RT							4.4	5.6						1			
U-181	678	4158+21.00 (I-70 EB)	U-76	RT					122.3	155.7								1			
U-182	678	5062+50.38 (RAMP C5)	D-104	LT							4.4	5.6						1			
U-183	678	5061+87.48 (RAMP C5)	D-114	RT							4.4	5.6						1			
U-184	678	4174+15.27 (I-70 EB)	U-164	RT	155.3	197.7												1			
U-185	678	4170+35.04 (I-70 EB)	D-54	RT					6.6	8.4	4.4	5.6						1			
U-186	678	5074+35.45 (RAMP C5)	U-94	LT					241.1	306.9			1.8	2.2				1			2
U-187	678	6006+17.04 (RAMP C6)	U-188	RT					179.5	228.5								1			
U-188	678	4174+20.30 (I-70 EB)	D-36	BL/RT					41.8	53.2	4.8	6.2	26	33				1			
U-189	677	252+86.40 (I-71 NB)	D-333	RT					104	105	4.4	5.6						1			
U-190	677	252+86.40 (I-71 NB)	U-191	BL	293	373												1			
U-191	677	259+51.96 (I-71 NB)	U-322	BL			39.6	50.4													
U-193	677	5005+99.92 (RAMP A5)	U-322	RT			22	28													
U-194	677	5009+95.00 (RAMP A5)	U-322	BL	151.8	193.2												1			
U-195	677	266+93.44 (I-71 NB)	U-322	RT	286.4	364.6												1			
U-196	677	5015+06.05 (RAMP A5)	D-265	RT					16.3	20.7	4.4	5.6						1			
U-197	677	270+30.35 (I-71 NB)	D-62	RT					37.4	47.6	4.4	5.6						1			
U-198	677	266+98.53 (I-71 NB)	D-61	RT					135.1	171.9	4.4	5.6						1			
U-199	677	258+66.57 (I-71 NB)	U-170	LT					37.8	48.2								1			
U-200	677	273+46.55 (I-71 NB)	D-63	RT					64.7	82.3	4.4	5.6						1			
U-201	677	273+64.54 (I-71 NB)	U-43	BL	104.3	132.7												1			
U-202	677	274+00.40 (I-70 NB)	U-43	LT					123.2	156.8								1			
U-203																					
U-204	677	5031+36.49 (RAMP C5)	U-4	BL					107.4	136.6			5.3	6.7				1			1
U-206	677	3007+17.85 (RAMP C3)	EXISTING UD	RT					79.6	101.4								1			
U-207	677	3004+98.21 (RAMP C3)	D-214	RT					88.9	113.1	4.4	5.6						1			
U-208	677	5041+36.91 (RAMP C5)	D-207	LT					370.5	471.5	4.4	5.6						1	1		
U-209	677	5041+36.91 (RAMP C5)	U-208	LT	48	61							2.6	3.4				1			1
U-210	677	5041+57.96 (RAMP C5)	D-216	LT					2.6	3.4	4.4	5.6						1			
U-211	677	5041+57.96 (RAMP C5)	D-216	LT	7	9							2.6	3.4				1			1
U-212	677	134+05.00 (I-70 EB)	D-206	RT					232.8	296.2	4.4	5.6						1			
U-214	679	4187+19.93 (I-70 EB)	D-155	LT					21.1	26.9	4.4	5.6						1			
U-215	679	4193+97.50 (I-70 EB)	D-60	RT					172.5	219.5	4.4	5.6						1			
TOTALS CARRIED TO SUBSUMMARY SHEET 222					1046	1332	192	241	2253	2840	76	96	70	90				37	2	2	5

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED JMB
CHECKED CWL

UNDERDRAIN ESTIMATED QUANTITIES

FRA-70/71-12.68/14.86

252A
1815

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UNDERDRAIN ESTIMATED QUANTITIES

FRA-70/71-12.68/14.86

252B 1815

CALCULATED JMB CHECKED CWL

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 4" UNCLASSIFIED PIPE UNDERDRAINS FT		605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 4" BASE PIPE UNDERDRAINS FT		605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		611 4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT		611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT		605 6" BASE PIPE UNDERDRAINS FT	605 6" UNCLASSIFIED PIPE UNDERDRAINS FT	611 6" CONDUIT, TPYE B FT		FOR INFORMATION ONLY 4" PLUG EACH	4" X 4" TEE EACH	4" 90° BEND EACH	6" PLUG EACH	6" X 6" TEE EACH	6" X 6" CROSS EACH	6" 90° BEND EACH
					4 01/NHS/PV	01/NHS/PV	01/NHS/PV	05/NHS/OT/COL	01/NHS/PV	01/NHS/PV	01/NHS/PV	05/NHS/OT/COL	01/NHS/PV	01/NHS/PV	01/NHS/PV	05/NHS/OT/COL	01/NHS/PV	01/NHS/PV	05/NHS/OT/COL	05/NHS/OT/COL	01/NHS/PV	01/NHS/PV								
U-216	679	4186+30.00 (I-70 EB)	EXISTING UD	BL									18.5	23.5													1			
U-218	680	23+15.00 (FULTON)	D-313	RT							10				10									1						
U-220	680	152+50.00 (FRONT)	D-323	LT							80				10									1						
U-221	680	152+50.00 (FRONT)	D-322	RT							93				10									1						
U-222	680	151+38.53 (FRONT)	D-320	RT			25																	1	1					
U-228	680	207+47.00 (LIVINGSTON)	D-340	RT								128				10								1						
U-230	680	206+04.66 (LIVINGSTON)	D-307	RT								183				10								1						
U-231	680	204+03.77 (LIVINGSTON)	D-307	RT				9																1						
U-233	680	148+44.14 (FRONT)	EXISTING UD	RT							84													1	1					
U-234	680	148+65.99 (FRONT)	EXISTING UD	LT							99													1	1					
U-236	680	204+09.50 (LIVINGSTON)	D-305	LT																		12					1	1		
U-239	680	200+04.47 (LIVINGSTON)	D-311	RT			18																	1						
U-240	680	200+42.56 (LIVINGSTON)	D-311	RT							11				10									1						
U-241	680	201+33.34 (LIVINGSTON)	D-309	RT							18				10									1						
U-242	680	202+39.36 (LIVINGSTON)	D-310	RT							92				10									1						
U-300	677	5033+50.00 (RAMP C5)	U-302	BL					26.4	33.6																				
U-301	677	5032+65.33 (RAMP C5)	U-303	BL					8.8	11.2																	1			
U-302	677	5032+90.46 (RAMP C5)	D-208	RT																	9.7	12.3						2		1
U-303	677	5032+85.51 (RAMP C5)	D-208	RT													5	6			9.7	12.3						2		2
U-304	677	5032+80.53 (RAMP C5)	D-209	LT									4.4	5.6			1.32	1.68									1	1		
U-305	677	3008+53.90 (RAMP C3)	EXISITNG UD	BL	20.2	25.8																					1			
U-306	677	5005+69.97 (RAMP A5)	U-329	LT									13.2	16.8													1			
U-307	678	5080+13.75 (RAMP C5)	U-89	LT									98.1	124.9							2.6	3.4					1			2
U-308	679	4193+97.50 (I-70 EB)	D-155	LT									264.9	337.1			4.4	5.6			1.3	1.7					1			2
U-317	680	148+21.33 (FRONT)	U-234	CL/LT							21													1						
U-318	680	148+20.59 (FRONT)	U-233	CL/RT							24													1						
U-319	680	151+44.97 (FRONT)	D-322	LT/RT							54				3									1		1				
U-329	677	5005+99.92 (RAMP A5)	U-332	LT					22.4	28.6																				
U-330	677	5005+99.92 (RAMP A5)	U-332	BL					22	28																				
U-331	680	12+54.07 (MOUND)	DJ-16	LT							14				10									1						
U-332	677	260+41.84 (I-71 NB)	D-225	LT/RT													5.7	7.3			31.2	39.8						1	4	
U-333	680	12+53.53 (MOUND)	DJ-15	RT							17				10									1		1				
U-334	680	155+37.00 (FRONT)	EXISITNG UD	RT							7				10									1						
U-337	680	155+36.04 (FRONT)	EXISITNG UD	LT							6				10									1						
U-338	680	11+49.83 (MOUND)	DJ-12	RT							15				10									1						
U-341	680	156+03.54 (FRONT)	EXISITNG UD	LT							14				10									1						
U-342	680	207+54.60 (LIVINGSTON)	U-236	CL																345										
TOTALS CARRIED TO SUBSUMMARY SHEET 222					21	26	43	9	80	102	659	311	400	508	123	20	17	21	345	12	55	70	22	3	2	8	7	4	7	

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	638 WATER WORK, MISC.: 1.5" WATER TAP (COLUMBUS 805)	638 WATER WORK, MISC.: 3" WATER SERVICE LINE TRANSFER (COLUMBUS 805)	SPECIAL 6" WATER MAIN DIP AND FITTINGS (COLUMBUS 801)	638 WATER WORK, MISC.: 6" WATER SERVICE LINE TRANSFER (COLUMBUS 805)	SPECIAL 8" WATER MAIN DIP AND FITTINGS (COLUMBUS 801)	638 WATER WORK MISC.: FIRE HYDRANT, RELOCATED (COLUMBUS 809)	SPECIAL 12" WATER MAIN DIP AND FITTINGS (COLUMBUS 801)	SPECIAL 20" BUTTERFLY VALVE WITH VALVE BOX (COLUMBUS 802)	638 WATER WORK, MISC.: 1.5" CURB STOP (COLUMBUS 805)	SPECIAL 6" GATE VALVE WITH VALVE BOX (COLUMBUS 802)	SPECIAL 8" GATE VALVE WITH VALVE BOX (COLUMBUS 802)	SPECIAL 12" GATE VALVE WITH VALVE BOX (COLUMBUS 802)	SPECIAL 6" FIRE HYDRANT (COLUMBUS 809)	SPECIAL WATER WORK MISC.: 20" x 6" TAPPING SLEEVE AND VALVE AND APPURTENANCES	SPECIAL WATER WORK MISC.: 24" x 6" TAPPING SLEEVE AND VALVE AND APPURTENANCES	FOR INFORMATION ONLY 1.5" - 90° BEND	6" - 22.5° BEND	6" - 45° BEND	6" X 6" X 3" TEE	6" X 6" X 6" TEE	12" - 11.25° BEND	8" - 45° BEND	12" X 10" REDUCER	12" X 12" X 12" TEE	12" - 22.5° BEND	12" - 45° BEND	12" X 8" REDUCER
				⚠4	EACH 01/NHS/PV	EACH 01/NHS/PV	FT 01/NHS/PV	EACH 01/NHS/PV	FT 01/NHS/PV	EACH 01/NHS/PV	FT 01/NHS/PV	EACH 01/NHS/PV	EACH 01/NHS/PV	EACH 01/NHS/PV	EACH 01/NHS/PV	EACH 01/NHS/PV	EACH 01/NHS/PV	EACH 01/NHS/PV	EACH 01/NHS/PV	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
W-1	906	206+84.89 (LIVINGSTON)		RT									1																		
W-2	909	151+74.58 (FRONT)		LT									1																		
W-11	906	206+83.29 (LIVINGSTON)	206+78.74 (LIVINGSTON)	LT/RT	1																										
W-13	909	151+19.89 (FRONT)		RT						1																					
W-14	909	19+49.86 (FULTON)		LT														1	1												
W-15	910	21+94.88 (FULTON)		LT														1		1											
W-16	909	151+74.50 (FRONT)	151+78.85 (FRONT)	LT	1																1										
W-17	907	4182+17.40 (I-70 EB)	4184+00.77 (I-70 EB)	RT		1	193.22	1						1				1				3	4	1	1						
W-18	909	19+42.64 (FULTON)		LT								1																			
W-19	908	4166+40.32 (I-70 EB)	4166+85.99 (I-70 EB)	LT/RT					55.75		511.06						1									1	1	1		1	4	1
W-20	911	5069+85.12 (RAMP C5)	5070+86.36 (RAMP C5)	RT							99.35						1												1	1	1	
W-21	910	22+38.59 (FULTON)		LT					6.00						1																
TOTALS CARRIED TO SUBSUMMARY SHEET 224					2	1	194	1	62	1	611	1	2	1	1	2	3	1	1	1	3	4	1	1	1	1	1	1	2	5	1

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED JMB
CHECKED CWL

WATER WORK ESTIMATED QUANTITIES

FRA-70/71-12.68/14.86

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 PIPE REMOVED, 24" AND UNDER FT	202 VALVE BOX REMOVED EACH	638 WATER WORK, MISC.: 6" WATER MAIN ABANDONED (COLUMBUS 808) EACH	638 WATER WORK, MISC.: 8" WATER MAIN ABANDONED (COLUMBUS 808) EACH			SPECIAL VALVE BOX ADJUSTED TO GRADE (COLUMBUS 807) EACH		SPECIAL CUT AND PLUG EXISTING 6" WATER LINE (COLUMBUS 808) EACH	SPECIAL CUT AND PLUG EXISTING 8" WATER LINE (COLUMBUS 808) EACH	SPECIAL CUT AND PLUG EXISTING 10" WATER LINE (COLUMBUS 808) EACH	SPECIAL CUT AND PLUG EXISTING 12" WATER LINE (COLUMBUS 808) EACH	SPECIAL FIRE HYDRANT ABANDONED (COLUMBUS 809) EACH			638 FIRE HYDRANT ADJUSTED TO GRADE EACH		
				4	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV			01/NHS/PV	05/NHS/OT/COL	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV			05/NHS/OT/COL		
WJ-1	909	5091+16.71 (RAMP C5)		LT							1											
WJ-2	909	5091+28.88 (RAMP C5)		LT							1											
WJ-3	909	19+53.92 (FULTON)		LT							1											
WJ-4	909	19+15.18 (FULTON)		LT							1											
WJ-5	909	19+14.97 (FULTON)		LT							1											
WJ-6	909	20+03.69 (FULTON)		LT							1											
WJ-7	909	20+05.36 (FULTON)		LT							1											
WJ-8	909	21+16.11 (FULTON)		LT							1											
WJ-10	910	22+38.62 (FULTON)		LT							1											
WJ-11	906	204+89.71 (LIVINGSTON)		RT																1		
WJ-12	906	204+91.74 (LIVINGSTON)		RT								1										
WJ-13	906	205+20.36 (LIVINGSTON)		RT								1										
WJ-14	906	205+55.71 (LIVINGSTON)		RT								1										
WJ-15	906	205+65.17 (LIVINGSTON)		RT								1										
WJ-16	906	205+68.76 (LIVINGSTON)		RT								1										
WJ-17	906	205+77.27 (LIVINGSTON)		RT								1										
WJ-18	906	207+15.35 (LIVINGSTON)		RT								1										
WJ-19	906	207+19.90 (LIVINGSTON)		RT								1										
WJ-20	907	200+64.79 (LIVINGSTON)		RT							1											
WJ-21	909	21+47.96 (FULTON)		LT								1										
WJ-22	909	151+20.91 (FRONT)		RT							1											
WR-1	907	4182+97.89 (I-70 EB)		RT														1				
WR-2	907	5086+96.17 (RAMP C5)	5087+96.52 (RAMP C5)	RT	160		1						1									
WR-3	909	19+35.09 (FULTON)		LT		1																
WR-4	909	19+83.14 (FULTON)		LT		1												1				
WR-5	909	21+15.90 (FULTON)		LT		1												1				
WR-6	281	4161+65.89 (I-70 EB)		LT				1														
WR-7	281	4157+93.32 (I-70 EB)	4158+14.26 (I-70 EB)	RT	25									2								
WR-8	908	5071+16.06 (RAMP C5)	5071+67.74 (RAMP C5)	LT/RT	134									2								
WR-9	908	5071+67.74 (RAMP C5)		LT				1														
WR-10	908	4166+58.46 (I-70 EB)		RT														1				
WR-11	911	5069+85.12 (RAMP C5)	5071+16.06 (RAMP C5)	RT	147												2					
WR-12	911	5070+83.82 (RAMP C5)	5071+16.06 (RAMP C5)	RT	66										1							
WR-13	908	5071+12.17 (RAMP C5)	4167+06.59 (I-70 EB)	LT/RT	262																	
WR-14	910	22+38.73 (FULTON)		LT		1																
TOTALS CARRIED TO SUBSUMMARY SHEETS 219,224					794	4	1	2			11	9	1	4	1	2	4			1		

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED JMB
CHECKED CWL

WATER WORK ESTIMATED QUANTITIES

FRA-70/71-12.68/14.86

STATION FROM	STATION TO	SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS	202 PAVEMENT REMOVED SY 01/NHS/PV	202 PAVEMENT REMOVED SY 01/NHS/PV	202 PAVEMENT REMOVED SY 05/NHS/OT/COL	202 PAVEMENT REMOVED, ASHPALT SY 01/NHS/PV	202 PAVEMENT REMOVED, ASHPALT SY 01/NHS/PV	202 PAVEMENT REMOVED, ASHPALT SY 05/NHS/OT/COL	202 WALK REMOVED SF 01/NHS/PV	202 CONCRETE BARRIER REMOVED FT 01/NHS/PV	202 CONCRETE BARRIER REMOVED FT 01/NHS/PV	202 TRAFFIC ISLAND REMOVED SY 01/NHS/PV	202 TRAFFIC ISLAND REMOVED SY 01/NHS/PV	202 CURB REMOVED FT 01/NHS/PV	202 CURB REMOVED FT 01/NHS/PV	202 CURB REMOVED FT 05/NHS/OT/COL	202 CURB AND GUTTER REMOVED FT 01/NHS/PV
DRIVEWAYS																					
DV-1	20+20.46 (FULTON)					570.75	63.42											12.83	16.33		
DV-2	20+55.92 (FULTON)					574.64	63.85											13.00	16.55		
DV-3	21+37.66 (FULTON)					370.84	41.20											6.15	7.83		
DV-4	152+11.68 (FRONT)					864.05	96.01											15.12	19.24		
DV-5	202+00.00 (LIVINGSTON)					479.69	53.30											2.41	3.06		
DV-5	202+00.00 (LIVINGSTON)					521.00				57.89											
DV-6	GATEWELL #4					320.72	35.64											16.41	20.89		
DV-8	204+61.50 (LIVINGSTON)					235.26			26.14											29.24	
DV-8	204+61.50 (LIVINGSTON)					148.37						16.49								14.01	
DV-9	205+69.33 (LIVINGSTON)					320.13			35.57											37.73	
DV-9	205+69.33 (LIVINGSTON)					18.38						2.04								1.54	
DV-11	5009+25.00 (RAMP A5)					843.74	93.75														
DV-11	5009+25.00 (RAMP A5)					47.39				5.27								10.80	13.74		
PARKING LOT																					
	LIVINGSTON & 2ND ST					2895.44				321.72								80.40	102.33		
SOUDER AVE																					
5+63.70	6+13.55	LT				216.20				24.02			327.46					20.48			29.39
5+61.73	6+12.28	RT				220.85				24.54			343.35					20.07			30.48
NORTHBOUND I.R. 71																					
252+86.40	258+90.12	LT/RT				16252.93	794.59	1011.29								10.18	12.96	26.00	33.00		
252+86.40	258+90.12	RT				4619.63				225.85	287.44							164.10	208.85		
5004+30.62 (RAMP A5)	5008+68.87 (RAMP A5)	LT				930.35				45.48	57.89							196.06	249.53		
5004+30.62 (RAMP A5)	5008+68.87 (RAMP A5)	LT/RT				7633.28	373.18	474.96													
5004+30.62 (RAMP A5)	5008+68.87 (RAMP A5)	RT				3756.43				183.65	233.73							49.62	63.15		
5011+81.5 (RAMP A5)	5018+60.36 (RAMP A5)	LT				2757.31				134.80	171.57							324.14	412.55		
5011+81.5 (RAMP A5)	5018+60.36 (RAMP A5)	LT/RT				12002.49	586.79	746.82													
5011+81.5 (RAMP A5)	5018+60.36 (RAMP A5)	RT				4001.93				195.65	249.01							250.86	319.28		
93497 TEMP RAMP (N.B. 71)		LT/RT				14797.78				723.45	920.75										
RAMP BC																					
SHOULDER		LT				3124.23				152.74	194.40							313.60	399.13		
LANE		LT/RT				15577.76	761.58	969.28													
SHOULDER		RT				9511.25				464.99	591.81							252.56	321.44		
PUMP STATION DRIVE		RT				1454.24	71.10	90.49						11.04	14.04			52.20	66.43		
RAMP C3																					
3002+01.52	3009+00.00	LT				3508.11				171.51	218.28					4.11	5.24	273.13	347.61		
3000+16.87	3009+00.00	LT/RT				14766.27	721.91	918.79													
3000+16.87	3009+00.00	RT				8662.39				423.49	538.99							396.19	504.25		
EASTBOUND I.R. 70																					
125+96.00	127+28.39	LT				1246.73				60.95	77.57			110.62	140.78						
119+98.35	127+28.39	LT/RT				13275.88	649.04	826.05													
119+98.35	127+28.39	RT				7498.50				366.59	466.57							320.42	407.81		
127+96.76	129+50.00	LT				1477.33				72.23	91.92							69.09	87.94		
127+96.76	130+51.85	LT/RT				9092.74	444.53	565.77													
127+96.76	130+51.85	RT				2575.00				125.89	160.22							108.96	138.68		
TOTALS CARRIED TO ROADWAY SUBSUMMARY ON SHEET 219							4850	5604	62	3781	4261	19	671	122	155	15	19	2995	3760	83	60

CALCULATED CJC
CHECKED CWL

PAVEMENT REMOVAL CALCULATIONS

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

FRA-70/71-12.68/14.86

256
1815

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11/22/2021
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STATION FROM	STATION TO	SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS	202 PAVEMENT REMOVED SY		202 PAVEMENT REMOVED, ASHPALT SY			202 WALK REMOVED SF		202 STEPS REMOVED FT	202 CONCRETE BARRIER REMOVED FT		202 TRAFFIC ISLAND REMOVED SF		202 CURB REMOVED FT			202 REMOVAL MISC.: TRAFFIC BOLLARDS REMOVED FT	202 REMOVAL MISC.: BRICK PAVERS REMOVED AND SALVAGED SF		
						4	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	05/NHS/OT /COL	01/NHS/PV	05/NHS/OT /COL	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	01/NHS/PV	05/NHS/OT /COL	01/NHS/PV	01/NHS/PV	05/NHS/OT /COL
EASTBOUND I.R. 70 CON'T																									
4158+21.33	4166+10.19	LT				7448.29			364.14	463.45															
4158+21.33	4166+10.19	RT				2076.80	101.53	129.22																	
4158+21.33	4166+10.19	RT				7158.31			349.96	445.41					62.14	79.08			289.21	368.09					
4169+93.98	4175+63.91	LT				4741.65			231.81	295.04					39.59	50.38									
4169+93.98	4175+63.91	LT/RT				29156.00	1425.4	1814.15																	
4169+93.98	4175+63.91	RT				6232.62			304.71	387.81									253.73	322.93					
4177+06.24	4208+14.75	LT				25248.72			1234.38	1571.03															
4177+06.24	4186+25.00	LT/RT				43131.49	2108.65	2683.74																	
4186+25.00	4195+78.19	LT				2884.96	141.04	179.51																	
4177+06.24	4186+25.00	RT				5838.34			285.43	363.27							1480.80	1884.66	408.74	520.21					
4187+96.15	4189+69.92	RT				4428.18			216.49	275.53					55.12	70.15			518.01	659.28					
WESTBOUND I.R. 70																									
542+50.00	544+03.63	LT				1408.86	68.88	87.66							64.50	82.09			1.52	1.94					
540+94.35	544+58.70	RT				2801.58	136.97	174.32							160.21	203.90									
RAMP FROM I.R. 70 TO FRONT ST																									
4181+61.77	4184+26.27	RT				3846.45	188.05	239.33									197.77	251.7	120.30	153.11					
4181+61.77	4184+26.27	RT				157.88			7.72	9.82									79.53	101.22					
RAMP FROM I.R. 70 TO 3RD ST																									
4186+25.00	4197+04.60	RT				1985.45			97.07	123.54					55.96	71.22	150.03	190.94	275.28	350.35					
4186+25.00	4196+76.51	RT				16310.34	797.39	1014.87																	
4186+25.00	4196+51.73	RT				7582.15			370.68	471.78					314.34	400.06			149.48	190.24					
LIVINGSTON AVE																									
200+02.98		LT/RT				17164.52			1907.17			6787.41					240.45	306.03	1239.75						
200+02.98	204+02.12	LT/RT				12988.12			1443.12			208.83							521.73			29.69			
204+02.12	207+47.00	LT/RT				11104.76					1233.86		2611.57								584.49			4067.04	
2ND ST																									
0+17.25	0+99.48	LT/RT				1816.45			201.83			256.01							73.37						
FRONT ST																									
146+75.00	148+25.58	LT/RT				2360.33			262.26			1558.12							102.25				161.43		
148+25.58	148+61.91	LT/RT				2319.33			257.70			804.68							79.87				32.47		
148+93.42	149+19.59	LT/RT				1780.32			197.81			494.78							70.00						
150+60.34	151+19.35	LT/RT				3398.02			377.56			997.18							60.75						
151+19.35	151+40.35	LT/RT				1151.26			127.92			578.38							42.02						
151+40.35	152+50.00	LT/RT				5852.62			650.29			2101.95		3.50					165.90						
148+78.00	150+60.22	RT																				182.21			
150+65.07	152+11.68	LT																				146.61			
FULTON ST																									
19+24.33	23+15.00	LT/RT				17192.18			1910.24			9584.21							694.29						
MOUND ST																									
11+49.85	12+53.78	LT/RT				7132.68			792.52																
WEST MOUND ST																									
23+48.52	25+21.36	LT				525.70	58.41												186.81						
WHITTIER ST																									
9+00.00	EX. A.S.	LT/RT				8591.05	420.01	534.55											270.16	343.84					
EX. A.S.	17+00.00	LT/RT				4608.95	225.33	286.78											143.44	182.56					
TOTALS CARRIED TO ROADWAY SUBSUMMARY ON SHEET 219							5672	7145	11591	4407	1234	23372	2612	4	752	957	2070	2634	5747	3194	585	359	194	4068	

CALCULATED CJC
CHECKED CWL

PAVEMENT REMOVAL CALCULATIONS

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

FRA-70/71-12.68/14.86

257
1815

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DRIVE CALCULATIONS

CALCULATED CJC | CHECKED CWL

REF. NO.	SHEET NO.	STATION/LOCATION	ALIGNMENT	SIDE	USAGE	TYPE	EXISTING MATERIAL	SURFACE AREA 1 (CADD AREA)	SURFACE AREA 2 (CADD AREA)	204 SUBGRADE COMPACTION		304 8" AGGREGATE BASE		305 7" CONCRETE BASE, CLASS QC MP		407 TACK COAT, 702.13 (0.075 GAL/SY)		407 NON-TRACKING TACK COAT (0.055 GAL/SY)		441 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG64-22		441 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)		452 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS		609 CURB, MISC.: COLUMBUS 18" GRANITE CURB	204 GEOTEXTILE FABRIC	609 CURB, TYPE 4-C	609 CURB, MISC.: COLUMBUS 18" CONCRETE CURB	
								SF	SF	SY		CY		SY		GAL		GAL		CY		CY		SY		FT	SY	FT	FT	
									4	01/NHS/ PV	05/NHS/ OT/COL	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	05/NHS/ OT/COL	01/NHS/ PV	05/NHS/ OT/COL	01/NHS/ PV	05/NHS/ OT/COL	01/NHS/ PV	05/NHS/ OT/COL	01/NHS/ PV	05/NHS/ OT/COL	01/NHS/ PV	05/NHS/ OT/COL	06/ENH/ OT/COL	01/NHS/ PV	01/NHS/ PV	01/NHS/ PV	05/NHS/ OT/COL
DV-1	370,584	20+20.46	FULTON ST.	LT	COMM.	-	CONC.	138.13	75.92	23.78														23.78						
DV-2	370,584	20+55.92	FULTON ST.	LT	COMM.	-	CONC.	144.91	95.50	26.71														26.71						
DV-3	370	21+37.66	FULTON ST.	LT	COMM.	1	CONC.	119.55	77.11	21.85														21.85		15.62				
DV-4	368-369	152+11.68	FRONT ST.	LT	COMM.	1	CONC.	334.59	193.14	58.64														58.64		15.62				
DV-5	585	202+00.00	LIVINGSTON	RT	COMM.	-	ASPHALT	365.51	777.20	126.97				86.36		6.04		4.75		3.6		4.2		40.61						
DV-6	586-587	GATEWELL #4			FIELD	-	GRAVEL	999.98	5109.34	678.81		55.51	70.65											111.11				163.16		
DV-7	588	RAILROAD			FIELD	-	GRAVEL	464.60	6583.59	783.13		71.53	91.03											51.62					43.83	
DV-8	375	204+61.50	LIVINGSTON	RT	COMM.	2A	ASPHALT	146.12	113.04		28.80				12.56		0.88		0.69		0.52		0.61		16.24					23.51
DV-9	375	205+69.33	LIVINGSTON	RT	COMM.	2B	CONC.	220.93			24.55														24.55					15.42
DV-10	318-320	GATEWELL #5			ACCESS	-	ASPHALT		22046.87	2449.65		239.52	304.85																		
DV-11	318	5009+25.00	RAMP A5	RT	FIELD	3	ASPHALT	764.49	844.00	178.72				93.78		6.56		5.16		3.91		4.56		84.94						
DV-12	304-323	RIVER ACCESS			FIELD	-	GRAVEL		24694.00	2743.78		268.28	341.45																		
DV-13	350	ELECTRIC			FIELD	-	GRAVEL		2841.98	315.78		30.88	39.30																		
DV-14	638-638A	RAILROAD			FIELD	-	GRAVEL		3829.82	425.54		41.61	52.96																		
DV-15	352-356	RR X-ING ACCESS			FIELD	-	GRAVEL		16477.74	1830.86		179.02	227.84																1830.86		
	590	PARKING LOT	LIVINGSTON	LT/RT		-	ASPHALT		3061.70	340.19				340.19		23.81		18.71		14.17		16.54							249.44	
TOTALS CARRIED TO GENERAL SUMMARY 211, 216										10005	54	887	1129	521	13	37	1	29	1	22	1	26	1	420	41	32	1831	164	294	39

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

FRA-70/71-12.68/14.86

STATION FROM	STATION TO	SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS	608 4" CONCRETE WALK SF 4 01/NHS/PV	608 4" CONCRETE WALK SF 04/MPO/OT	608 4" CONCRETE WALK SF 05/NHS/OT/COL	608 8" CONCRETE WALK SF 01/NHS/PV	608 8" CONCRETE WALK SF 04/MPO/OT	608 8" CONCRETE WALK SF 05/NHS/OT/COL	608 WALKWAY, MISC.: COLUMBUS CURB RAMP, TYPE A EACH 01/NHS/PV	608 WALKWAY, MISC.: COLUMBUS CURB RAMP, TYPE P-7 EACH 01/NHS/PV	608 WALKWAY, MISC.: COLUMBUS CURB RAMP, TYPE P-4 MODIFIED EACH 01/NHS/PV	608 WALKWAY, MISC.: BRICK PAVER WALK SF 04/MPO/OT	608 WALKWAY, MISC.: BRICK PAVER WALK SF 06/ENH/OT/COL
LIVINGSTON AVE																	
203+92.24	203+94.99	LT	2.75	5.00	13.75				13.75								
203+94.99	205+51.56	LT	156.57	10.00	1565.70				1565.70								
205+51.56	205+54.52	LT	2.96	10.20	30.19				30.19								
205+54.52	206+01.15	LT	46.63	12.34	575.41				575.41								
206+01.15	206+19.39	LT	18.24	15.21	277.43				277.43								
206+19.39	207+31.89	LT	112.5	13.50	1518.75				1518.75								
207+31.89	207+47.00	LT	15.11	19.17	289.66				289.66								
200+04.37	200+42.61	RT	38.24	7.00	267.68		267.68										
200+42.61	200+46.21	RT	CADD			22.23	22.23										
200+46.21	200+59.83	RT	CADD			129.69	119.66			10.03					1		
200+86.31	201+02.97	RT	CADD			133.67	123.61			10.06				1			
201+02.97	201+64.67	RT	61.70	7.00	431.90		431.90										
201+64.67	201+72.99	RT	8.32	7.00	58.24					58.24							
202+24.80	202+31.48	RT	CADD			49.41				49.41							
202+31.48	202+43.98	RT	CADD			93.09	93.09										
202+43.98	202+54.35	RT	10.37	7.00	72.59		72.59										
202+54.35	203+01.10	RT	CADD			984.85				3.48	29.11		2			232.69	719.57
203+50.91	203+79.46	RT	CADD			532.56				37.18			2				495.38
203+79.46	203+91.30	RT	CADD			101.33			101.33								
203+91.30	204+44.27	RT	52.97	9.00	476.73				476.73								
204+04.18	204+15.03	RT	CADD			32.24			32.24								
204+44.27	204+80.09	RT	CADD			169.87						169.87					
204+80.09	205+53.87	RT	73.78	9.00	664.02				664.02								
205+53.87	205+95.38	RT	CADD			198.91						198.91					
205+95.38	206+33.97	RT	38.59	11.57	446.49				446.49								
206+33.97	206+55.18	RT	21.21	11.96	253.67				253.67								
206+55.18	207+47.00	RT	CADD			1270.24			1270.24								
FRONT ST																	
147+75.00	147+87.44	LT	12.44	16.87	209.86		209.86										
147+87.44	148+19.39	LT	31.95	16.03	512.16		512.16										
148+19.39	148+31.07	LT	11.68	15.00	175.20		175.20										
148+19.39	148+31.07	LT	CADD			53.91		53.91									
151+16.33	151+39.35	LT	CADD			527.07				39.85			2				487.22
151+39.35	151+80.02	LT	40.67	13.50	549.05		549.05										
151+80.02	152+42.78	LT	CADD			332.65				332.65							
152+42.78	152+50.00	LT	7.22	14.46	104.40		104.40										
152+50.00	152+57.34	LT	7.34	14.43	105.92		105.92										
147+75.00	147+90.99	RT	CADD			167.37	167.37										
147+90.99	148+10.77	RT	19.78	17.50	346.15		346.15										
148+10.77	148+20.71	RT	CADD			139.46	139.46										
TOTALS CARRIED TO ROADWAY SUBSUMMARY ON SHEET 220							3441	54	7516	541	30	369	6	1	1	233	1703

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED CJC
CHECKED CWL

WALK CALCULATIONS

FRA-70/71-12.68/14.86

STATION FROM	STATION TO	SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS	608 4" CONCRETE WALK SF 01/NHS/PV	608 4" CONCRETE WALK SF 04/MPO/OT	608 8" CONCRETE WALK SF 01/NHS/PV	608 8" CONCRETE WALK SF 04/MPO/OT	608 CONCRETE STEPS, TYPE B, AS PER PLAN FT 01/NHS/PV	608 WALKWAY, MISC.: COLUMBUS CURB RAMP, TYPE A EACH 01/NHS/PV	608 WALKWAY, MISC.: BRICK PAVER WALK SF 04/MPO/OT	608 WALKWAY, MISC.: BRICK PAVER WALK SF 06/ENH/OT/COL
FRONT ST														
151+02.93	151+39.35	RT		CADD		874.94				38.65		2	357.22	479.07
151+39.35	151+48.14	RT	8.79	10.71	94.14		94.14							
151+39.35	151+48.14	RT		CADD		37.47		37.47						
151+48.14	151+56.15	RT	8.01	10.64	85.23		85.23							
151+56.15	151+61.40	RT	5.25	9.23	48.46		48.46							
151+61.40	151+86.60	RT	25.20	10.71	269.89		269.89							
151+86.60	151+91.67	RT	5.07	6.51	33.01		33.01							
151+91.67	152+09.97	RT	18.30	7.98	146.03		146.03							
152+09.97	152+18.09	RT	8.12	12.06	97.93		97.93							
FULTON ST														
19+45.63	19+50.88	LT	5.25	9.05	47.51		47.51							
19+50.88	19+61.79	LT	10.91	10.65	116.19		116.19							
19+45.63	19+61.79	LT		CADD		97.24		97.24						
19+61.79	19+75.72	LT	13.93	10.89	151.70		151.70							
19+75.72	19+80.97	LT	5.25	9.64	50.61		50.61							
19+80.97	20+02.23	LT	21.26	11.32	240.66		240.66							
20+02.23	20+79.35	LT		CADD		472.73			472.73					
20+79.35	20+96.22	LT	16.87	13.45	226.90		226.90							
20+96.22	21+00.32	LT	4.10	12.26	50.27		50.27							
21+00.32	21+24.16	LT	23.84	14.07	335.43		335.43							
21+24.16	21+51.09	LT		CADD		194.18			194.18					
21+51.09	22+00.00	LT	48.91	15.83	774.25		774.25							
22+00.00	22+40.00	LT	40.00	17.10	684.00		684.00							
22+40.00	23+00.00	LT	60.00	18.47	1108.20		1108.20							
23+00.00	23+15.00	LT	15.00	19.81	297.15		297.15							
19+83.00	20+40.93	RT	57.93	12.50	724.13		724.13							
20+40.93	20+44.79	RT	3.86	14.43	55.70		55.70							
20+44.79	20+48.93	RT	4.14	16.36	67.73		67.73							
20+48.93	20+52.76	RT	3.83	14.43	55.27		55.27							
20+52.76	22+79.08	RT	226.32	12.50	2829.00		2829.00							
22+79.08	22+84.08	RT	5.00	8.68	43.40		43.40							
22+84.08	23+00.00	RT	15.92	4.86	77.37		77.37							
23+00.00	23+15.00	RT	15.00	7.91	118.65		118.65							
SOUDER AVE														
5+63.70	5+71.08	LT	7.38	7.17	52.91		52.91							
5+71.08	5+95.13	LT	24.05	6.41	154.16		154.16							
5+95.13	6+13.55	LT	18.42	6.33	116.60		116.60							
5+61.73	5+68.73	RT	7.00	7.60	53.20		53.20							
5+68.73	6+12.28	RT	43.55	6.32	275.24		275.24							
FRA-70-13.95												8		
CONCRETE STEPS														
151+43.54	2 TREAD	RT		6.89							13.78			
TOTALS CARRIED TO ROADWAY SUBSUMMARY ON SHEET 220							9481	135	667	39	14	10	358	480

NO.	DESCRIPTION	REV. BY	DATE
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CALCULATED CJC
CHECKED CWL

WALK CALCULATIONS

FRA-70/ 71-12.68/ 14.86

℄ CONST. I-70 WB

℄ ROAD "D"

℄ ROAD "C"

℄ CONST. FUTURE I-70 EB

℄ CONST. I-70 EB

℄ CONST. RAMP C5

℄ CONST. RAMP C6

MATCHLINE STA. 4162+00 ℄ CONST. I-70 EB

MATCHLINE STA. 4167+00 ℄ CONST. I-70 EB

ex. easement

ex. mist (TO REMAIN)

ex. median barrier (TO REMAIN)

ex. o/h sign

ex. 5.5' elec. tunnel (TO REMAIN)

ex. elec. ducts (TO REMAIN)

ex. tunnel shaft and vault (TO REMAIN)

PROP. WATER RELOCATED

ex 8" w/ (P0010-02) (TBA)

Ex LA-R/W

END SHLD. RECONST., LT. MEET EX. STA. 166+01.56, STA. 4166+01.56

END SHLD. RECONST., RT. MEET EX. STA. 166+21.70 STA. 4166+21.70

SAWCUT

BEGIN CURB, TYPE 4-C STA. 165+91.66

BTA, TYPE 1

TEMP. SHORING TS2

TEMP. WALL T2

PROP. WALL 4W10

STRUCTURE NO. FRA-70-1358R (TO REMAIN)

STRUCTURE NO. FRA-70-1358A

STRUCTURE NO. FRA-70-1357A

PC Sta. 6000+00.00

PCC Sta. 5069+99.95

PT Sta. 4164+98.77

PIPE THRU

12" RCP FRA-70-12.31S

15" RCP FRA-70-12.31S

18" RCP FRA-70-12.31S

DOP U/G Primary

DOP O/H Primary

6" GAS (TO BE ABANDONED)

overhead electric

TELEPHONE

(CS-MP)

111 ℄ CONST. I-70 EB
P.I. Sta. 4162+43.22
Δ = 15° 31′ 32″ (RT)
Dc = 3° 01′ 08″
R = 1,897.86′
T = 258.72′
L = 514.26′
E = 17.55′
C = 512.69′
C.B. = N 74° 45′ 15″ E
e_{max} = exist.
P.C. Sta. 4159+84.50
P.T. Sta. 4164+98.77
D.S. = 60 MPH

5 ℄ CONST. FUTURE I-70 EB
P.I. Sta. 167+27.31
Δ = 31° 42′ 37″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 1,084.84′
L = 2,114.01′
E = 151.07′
C = 2,087.14′
C.B. = N 81° 13′ 18″ E
e_{max} = 0.037 (FUTURE)
P.C.C. Sta. 156+42.47
P.T. Sta. 177+56.48
D.S. = 60 MPH

FOR STRUCTURE PLANS, SEE SHEETS 1472-1507
FOR I-70 EB PROFILE, SEE SHEET 284
FOR RAMP C5 PLANS, SEE SHEETS 331-361
FOR RAMP C6 PLANS, SEE SHEETS 362-367
FOR RETAINING WALL DETAILS, SEE SHEETS 831-834
FOR PIPE PROFILES, SEE SHEETS 284, 397
FOR SIGNING PLANS, SEE SHEETS 1014-1049
FOR UNDERDRAIN DETAILS, SEE SHEETS 677-680
FOR LIGHTING PLANS, SEE SHEETS 1163-1205A
FOR ITS PLANS, SEE SHEETS 1122-1162
FOR TEMP. WALL AND SHORING DETAILS, SEE SHEETS 889-902
FOR WATER WORK DETAILS, SEE SHEETS 905-920
FOR UTILITY LEGEND, SEE SHEET 3
FOR ESTIMATED QUANTITIES, SEE SHEETS 230-255

ITEM 670 - DITCH EROSION PROTECTION

NO.	DESCRIPTION	REV. BY	DATE
4	WIDENED BPD	CWL	11-29-2021

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED TMT
CHECKED CWL

PLAN - I-70 EASTBOUND
STA. 4162+00.00 TO STA. 4167+00.00

FRA-70/71-12.68/14.86

283
1815

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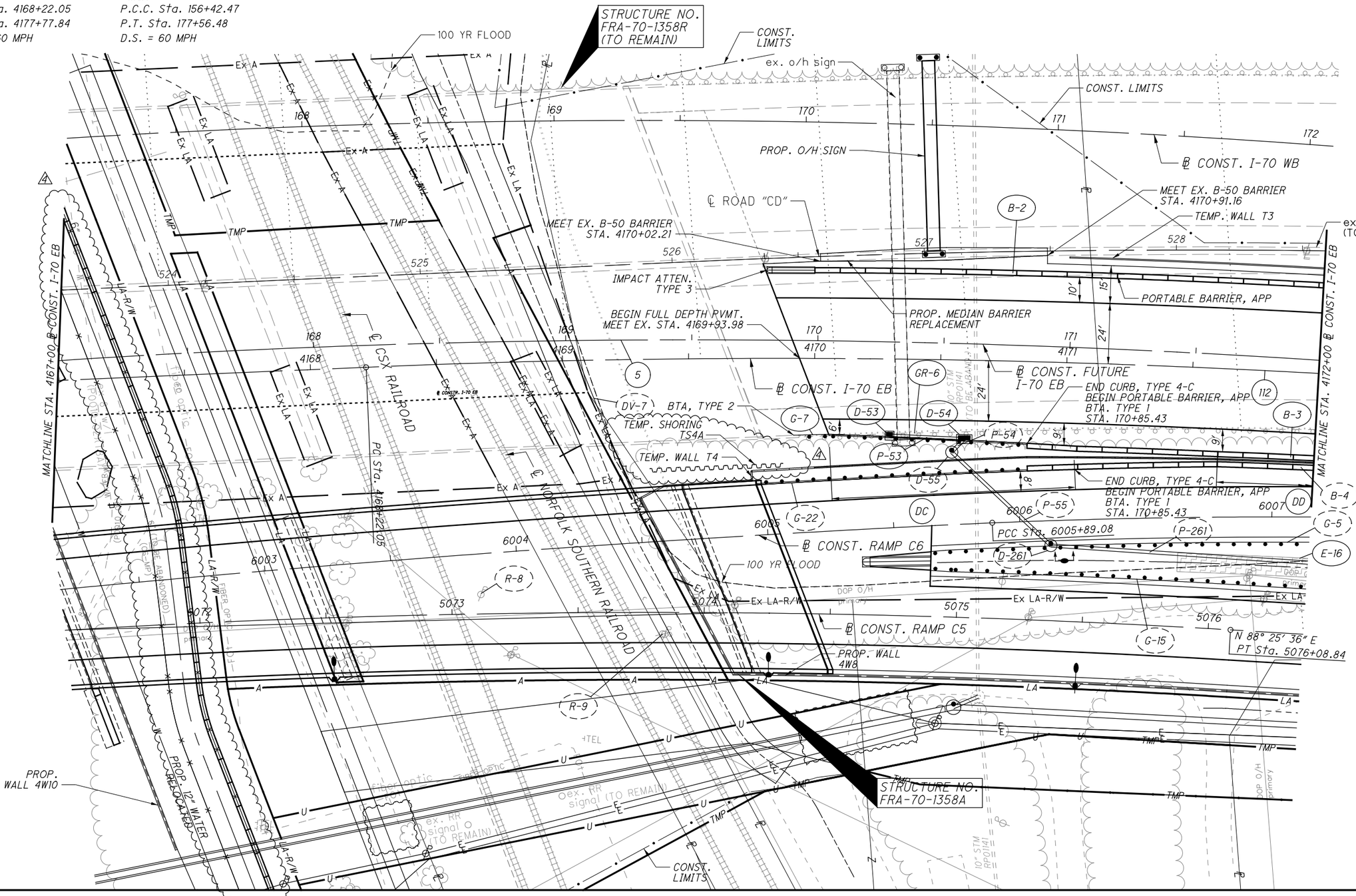
(112) ℄ CONST. I-70 EB
P.I. Sta. 4173+02.46
Δ = 14° 20′ 13″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 480.41′
L = 955.79′
E = 30.09′
C = 953.30′
C.B. = N 89° 41′ 07″ E
emax = 0.037
P.C. Sta. 4168+22.05
P.T. Sta. 4177+77.84
D.S. = 60 MPH

(5) ℄ CONST. FUTURE I-70 EB
P.I. Sta. 167+27.31
Δ = 31° 42′ 37″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 1,084.84′
L = 2,114.01′
E = 151.07′
C = 2,087.14′
C.B. = N 81° 13′ 18″ E
emax = 0.037 (FUTURE)
P.C.C. Sta. 156+42.47
P.T. Sta. 177+56.48
D.S. = 60 MPH

FOR TEMP. WALL AND SHORING DETAILS, SEE SHEETS 889 - 902
FOR WATER WORK DETAILS, SEE SHEETS 905-920
FOR I-70 EB PROFILE, SEE SHEET 286
FOR RAMP C5 PLANS, SEE SHEETS 331-361
FOR RAMP C6 PLANS, SEE SHEETS 362-367
FOR GORE DETAILS, SEE SHEETS 560-571
FOR STRUCTURE PLANS, SEE SHEETS 1472 -1507
FOR RETAINING WALL DETAILS, SEE SHEETS 804-823, 831-834
FOR SIGNING PLANS, SEE SHEETS 1014-1049
FOR UNDERDRAIN DETAILS, SEE SHEETS 677- 680
FOR LIGHTING PLANS, SEE SHEETS 1163 -1205A
FOR ITS PLANS, SEE SHEETS 1122 - 1162
FOR UTILITY LEGEND, SEE SHEET 3
FOR ESTIMATED QUANTITIES, SEE SHEETS 230-255

TAPER TABLE								
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
DC	4170+05.70	I-70 EB	4171+05.70	I-70 EB	RT	SHOULDER	6.03′	9.00′	34:1
DD	4171+61.37	I-70 EB	4172+63.13	I-70 EB	RT	PB OFFSET	33.00′	32.00′	102:1

ITEM 670 - DITCH EROSION PROTECTION



NO.	DESCRIPTION	REV. BY	DATE
4	ADDED TEMP. SHORING TS4A / WIDENED BPD	CWL	11-29-2021

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED TMT
CHECKED CWL

PLAN - I-70 EASTBOUND
STA. 4167+00.00 TO STA. 4172+00.00

FRA-70/71-12.68/14.86

285
1815

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FOR PIPE PROFILES, SEE SHEETS 353, 484, 665, 666
FOR RAMP C5 PROFILE, SEE SHEET 353
FOR RAMP C6 PLANS, SEE SHEETS 362-367
FOR I-70 EB PLANS, SEE SHEETS 265-303
FOR GORE DETAILS, SEE SHEETS 560-571
FOR STRUCTURE PLANS, SEE SHEETS 1472-1507
FOR RETAINING WALL DETAILS, SEE SHEETS 804 - 823, 831 - 834
FOR WATER WORK DETAILS, SEE SHEETS 905 - 920
FOR UNDERDRAIN DETAILS, SEE SHEETS 677 - 680
FOR ITS PLANS, SEE SHEETS 1122 - 1162
FOR LIGHTING PLANS, SEE SHEETS 1163 - 1205A
FOR SIGNING PLANS, SEE SHEETS 1014 - 1049
FOR UTILITY LEGEND, SEE SHEET 3
FOR ESTIMATED QUANTITIES, SEE SHEETS 230 - 255
FOR TEMP. WALL AND SHORING DETAILS, SEE SHEETS 889A-902
FOR DRIVE DETAILS, SEE SHEETS 583 - 590
FOR BIKE PATH DETOUR PLANS, SEE SHEETS 636 - 643R

℄ ROAD "C"
℄ CONST. I-70 EB
℄ CONST. I-70 WB
℄ ROAD "CD"
℄ CONST. FUTURE I-70 EB
℄ CONST. RAMP C6
℄ CONST. RAMP C5
EX. STRUCTURE NO. FRA-70-1358A (TO REMAIN)
STRUCTURE NO. FRA-70-1358A
100 YR FLOOD
ST STA. 523+25.45
PC STA. 4168+22.05
PC STA. 526+14.07
MATCHLINE STA. 5070+00 ℄ CONST. RAMP C5
MATCHLINE STA. 5075+00 ℄ CONST. RAMP C5
BEGIN 4-C CURB STA. 6001+51.38
BEGIN APPROACH SLAB STA. 5071+18.62
BEGIN 4-C CURB STA. 5070+95.32
END APPROACH SLAB STA. 5074+40.30
BTA, TYPE 1
TEMP WALL T2
TEMP. SHORING TS2
TEMP SHORING TS4A
TEMP WALL T4
IMPACT ATT., TYPE 3
PROP. WALL 4W8
PROP. WALL 4W10
PROP. WATER
PROP. ELECTRIC (103184)
PROP. BIKE PATH DETOUR
CONST. LIMITS
RAILROAD ACCESS ROAD
℄ CSX RAILROAD
℄ NORFOLK SOUTHERN RAILROAD
ex. easement
Ex LA-R/W
LA-R/W
Ex A
TMP
Fiber optic
ex. RR signal (TO REMAIN)
Ex. propane tank (TO REMAIN)
ex. RR switch box (TO REMAIN)
DOP O/H primary
12" WATER
6" GAS (TO BE ABANDONED)
10" WATER (abandoned)
8" WATER (abandoned)
WOODS FIBER OPTIC (TO BE ABANDONED)
grass
woods

17 ℄ CONST. RAMP C5
P.I. Sta. 5073+05.04
Δ = 9° 08′ 00″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 305.09′
L = 608.89′
E = 12.16′
C = 608.25′
C.B. = N 83° 51′ 36″ E
e_{max} = 0.028
P.C.C. Sta. 5069+99.95
P.T. Sta. 5076+08.84
D.S. = 50 MPH

ITEM 670 - DITCH EROSION PROTECTION

NO.	DESCRIPTION	REV. BY	DATE
4	ADDED TEMP. SHORING TS4A / WIDENED BPD	CWL	11-29-2021

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED TMT
CHECKED CWL

PLAN - RAMP C5
STA. 5070+00.00 TO STA. 5075+00.00

FRA-70/71-12.68/14.86

352
1815

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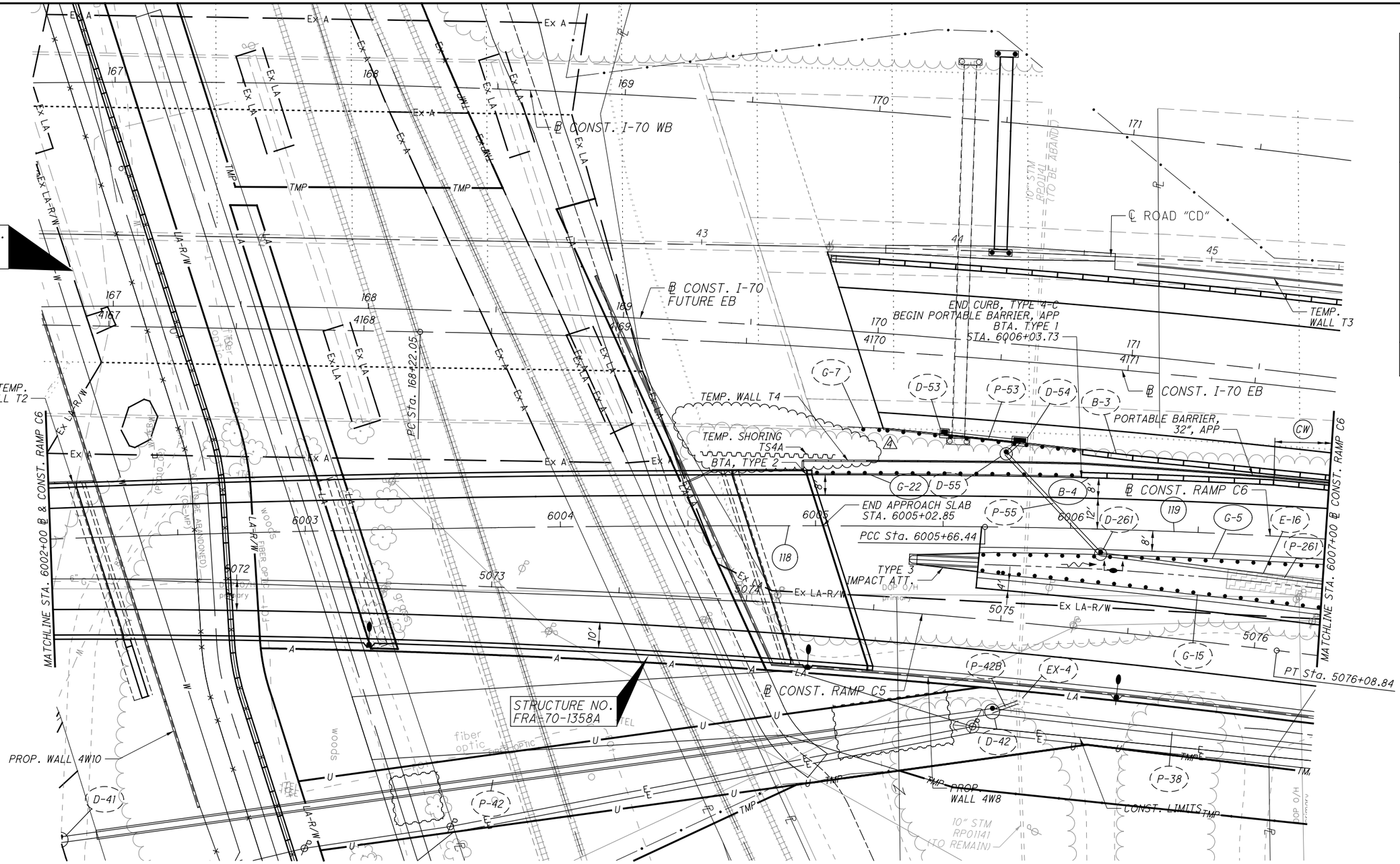

NO.	DESCRIPTION	REV. BY	DATE
4	ADDED TEMP. SHORING TS4A	CWL	11-29-2021

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED TMT
CHECKED CWL

PLAN - RAMP C6
STA. 6002+00.00 TO STA. 6007+00.00

FRA-70/71-12.68/14.86

364
1815

(118) ℄ CONST. RAMP C6
P.I. Sta. 6002+83.35
Δ = 4° 14′ 54″ (RT)
Dc = 0° 45′ 00″
R = 7,639.44′
T = 283.35′
L = 566.44′
E = 5.25′
C = 566.31′
C.B. = N 79° 58′ 34″ E
e max = 0.028
P.C. Sta. 6000+00.00
P.T. Sta. 6005+66.44
D.S. = 50 MPH

(119) ℄ CONST. RAMP C6
P.I. Sta. 6007+89.84
Δ = 9° 26′ 10″ (RT)
Dc = 2° 07′ 00″
R = 2706.89′
T = 223.41′
L = 445.80′
E = 9.20′
C = 445.30′
C.B. = N 86° 49′ 06″ E
e max = 0.037
P.C. Sta. 6005+66.44
P.C.C. Sta. 6010+12.24
D.S. = 50 MPH

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
CW	6006+78.47	RAMP C6	6007+78.47	RAMP C6	LT	PORT BARRIER	8.00′	4.00′	25:1

ITEM 670 - DITCH EROSION PROTECTION

FOR RAMP C6 PROFILE, SEE SHEET 365
FOR RAMP C5 PLANS, SEE SHEETS 331-361
FOR I-70 EB PLANS, SEE SHEETS 265-303
FOR STRUCTURE PLANS, SEE SHEETS 1472-1507
FOR GORE DETAILS, SEE SHEETS 560-571
FOR RETAINING WALL DETAILS, SEE SHEETS 804-823, 831-834, 898, 899
FOR PIPE PROFILES, SEE SHEETS 365, 397
FOR UNDERDRAIN DETAILS, SEE SHEETS 677-680
FOR LIGHTING PLANS, SEE SHEETS 1163-1205
FOR ITS PLANS, SEE SHEETS 1122-1162
FOR UTILITY LEGEND, SEE SHEET 3
FOR SIGNING PLANS, SEE SHEETS 1014-1049
FOR ESTIMATED QUANTITIES, SEE SHEETS 230-255

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SEEDING	
END WIDTH	SQ. YDS.
	19
0	
	0
0	
0	
	9
	19

NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	ATR	11-29-2021

4 [#] ITEM 203 - GRANULAR EMBANKMENT

ITEM 206 - CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP

ITEM 202 - PAVEMENT REMOVED

ITEM 202 - PAVEMENT REMOVED, ASPHALT

744.74
4170+00.00
744.74

EX LA-R/W

LA

MEET EXISTING (SKEW)
744.80
4169+93.98
744.80

AH RESUME SEEDING
BK

AH RESUME EARTHWORK
BK

EX LA-R/W

D-51
STA 4166+11.70 (I-70 EB), 34.09' RT
CB-3, GRATE ELEV 739.65
15" (S) 734.50
6" UD (E) 736.67

D-52
STA 4166+11.70 (I-70 EB), 44.88' RT
MH-3, RIM ELEV 738.44
15" (N) 734.39
15" (W) 734.39

END SHOULDER RECONSTRUCTION LT.
STA. 4166+01.56

END SHOULDER RECONSTRUCTION RT.
STA. 4166+21.70

EX GEN
EX GEN
SAWCUT
EX GEN
SAWCUT
D-52
D-51
EX GEN
3:1
MATCHLINE RAMP C5
P-51
11'-15" TYPE C @ 0.99%
43.1' RT
℄=737.8

4166+00.00
740.22

AH SUSPEND SEEDING
BK

AH SUSPEND EARTHWORK
BK

EX LA-R/W

6" gas telecom

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		175	[871] 4
91	0		
		24	[3] 4
	4		
AH 124	[24]		
BK 0	0		
AH 0	0		
BK 30	5		
		199	[874] 4

CALCULATED ATR
CHECKED CWL

CROSS SECTIONS I-70 EASTBOUND
STA. 4166+00.00 TO STA. 4170+00.00

FRA-70/71-12.68/14.86

396
1815

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SEEDING	
END WIDTH	SQ. YDS.
	72
11	
	50
7	
	122

NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	ATR	11-29-2021

[#] ITEM 203 - GRANULAR EMBANKMENT

LOAD TRANSFER PLATFORM (INCLUDED WITH RETAINING WALL ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS)

ITEM 206 - CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP

ITEM 202 - PAVEMENT REMOVED

ITEM 202 - PAVEMENT REMOVED, ASPHALT

D-261
STA 6006+12.03 (C6), 4.00' RT
MH-3, RIM ELEV 749.98
15" (N) 738.08
15" (E) 738.08
6" UD (W) 746.83

PORTABLE BARRIER, 32", BRIDGE MOUNTED, A.P.P.

PORTABLE BARRIER, 32", BRIDGE MOUNTED, A.P.P.

℄ RAMP C6

D-261

5:1

5:1

MATCHLINE RAMP C5

TEMP. RETAINING WALL T4

77.3' RT
℄=749.3

744.58
4171+00.00
743.00

P-55
54'-15" TYPE B @ 1.00%

EX LA-R/W

LA

D-54
STA 4170+59.91 (I-70 EB), 31.65' RT
CB-3, GRATE ELEV 743.28
15" (W) 738.68
15" (S) 738.68
6" UD (E) 740.30
6" UD (W) 740.30
6" UD (N) 740.30

D-55
STA 4170+55.00 (I-70 EB), 36.57' RT
MH-3, RIM ELEV 744.15
15" (NE) 738.62
15" (SE) 738.62

PORTABLE BARRIER, 32", BRIDGE MOUNTED, A.P.P.

D-54

D-55

℄ RAMP C6

8:1

MATCHLINE RAMP C5

TEMP. RETAINING WALL T4

80.5' RT
℄=750.2

P-54
7'-15" TYPE C @ 0.83%

P-55
54'-15" TYPE B @ 1.00%

744.46
4170+50.00
744.16

EX LA-R/W

LA

10" stm
(TO BE ABAND.)

770 760 750 740 730 720 710 700

120 100 80 60 40 20 0 20 40 60 80 100 120

END AREA	
CUT	FILL

VOLUME	
CUT	FILL
309 [2278]	
196 [1117]	
380 [1906]	
214 [941]	
689 [4184]	

CALCULATED ATR
CHECKED CWL

CROSS SECTIONS I-70 EASTBOUND
STA. 4170+50.00 TO STA. 4171+00.00

FRA-70/71-12.68/14.86

397
1815

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SEEDING	
END WIDTH	SQ. YDS.
	106
18	
	92
15	
	198

NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	ATR	11-29-2021

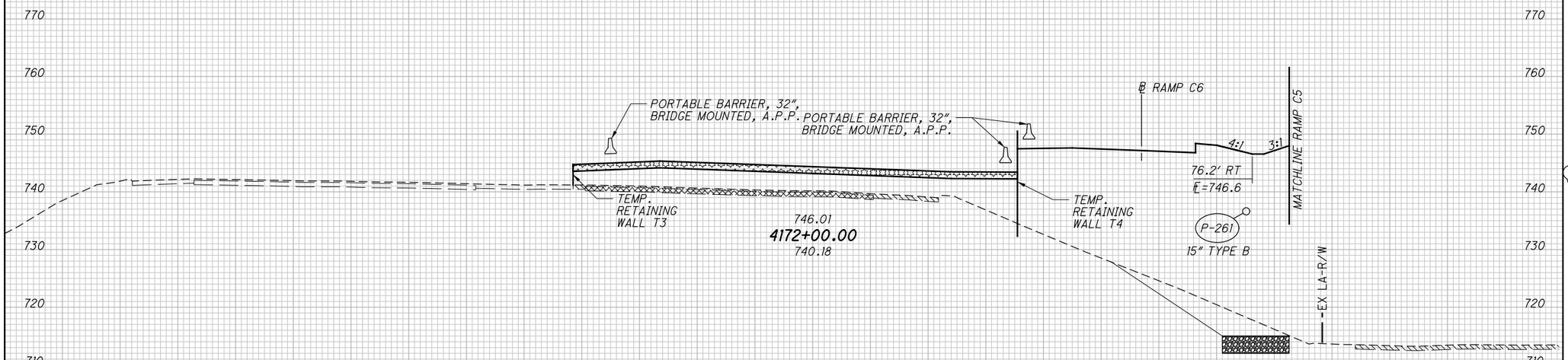
[#] ITEM 203 - GRANULAR EMBANKMENT

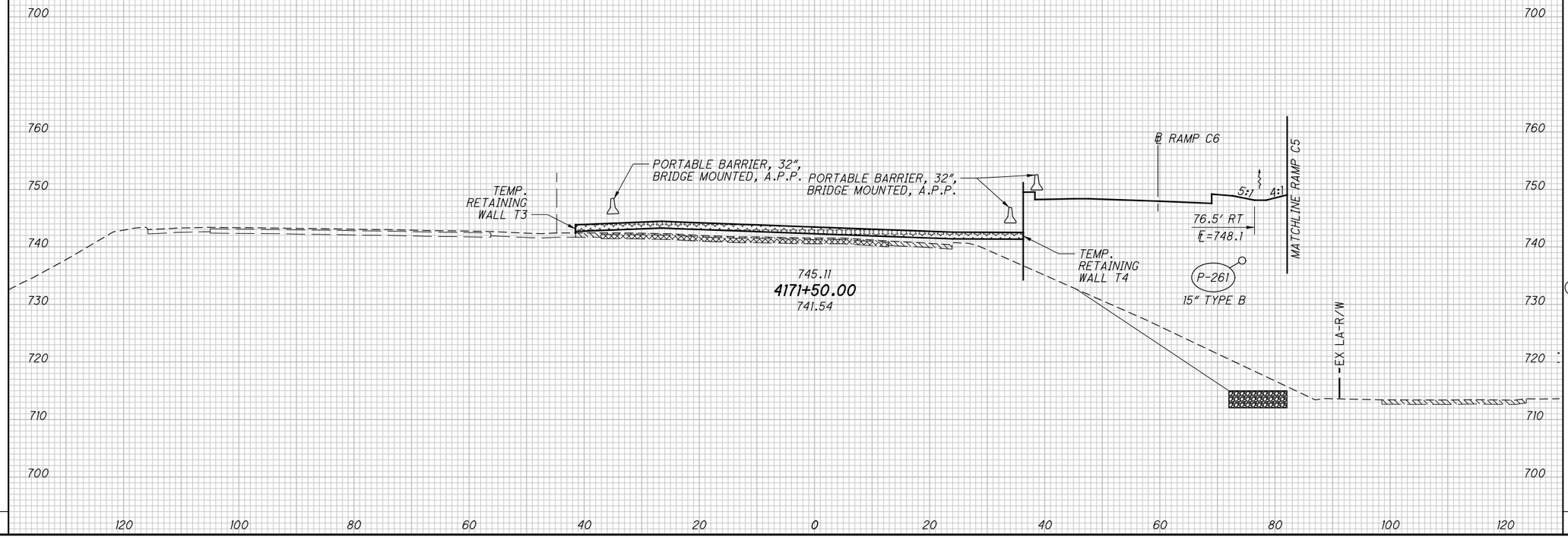
LOAD TRANSFER PLATFORM (INCLUDED WITH RETAINING WALL ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS)

ITEM 206 - CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP

ITEM 202 - PAVEMENT REMOVED

ITEM 202 - PAVEMENT REMOVED, ASPHALT





END AREA	
CUT	FILL
114	[155]

VOLUME	
CUT	FILL
213	[3090]
233	[2680]
138	[1343]
446	[5770]

CALCULATED ATR

CHECKED CWL

CROSS SECTIONS I-70 EASTBOUND STA. 4171+50.00 TO STA. 4172+00.00

FRA-70/71-12.68/14.86

398
1815

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SEEDING	
END WIDTH	SQ. YDS.
	122
22	
	117
20	
	239

NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	ATR	11-29-2021

△4 [#] ITEM 203 - GRANULAR EMBANKMENT

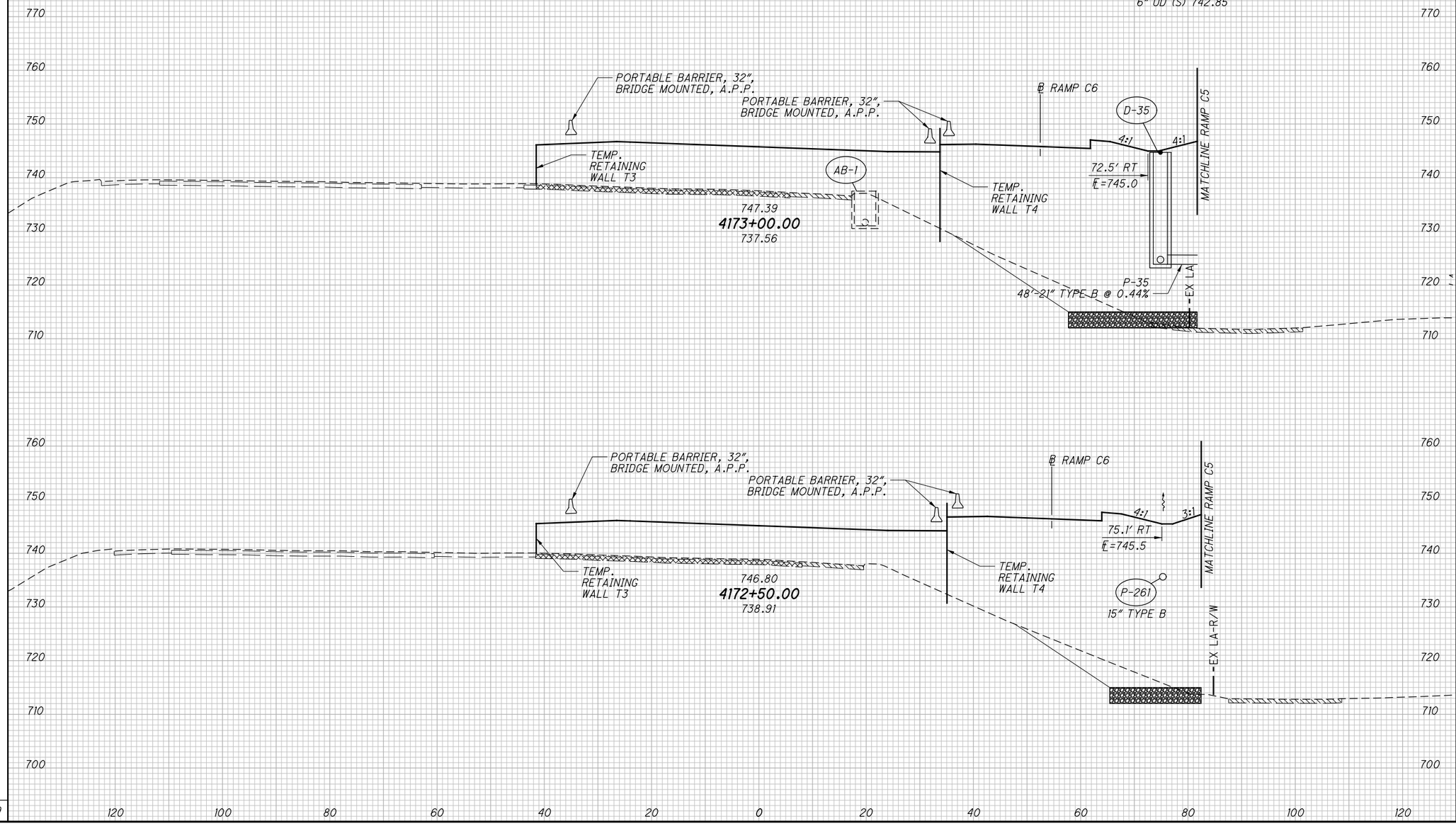
LOAD TRANSFER PLATFORM (INCLUDED WITH RETAINING WALL ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS)

ITEM 202 - PAVEMENT REMOVED

ITEM 202 - PAVEMENT REMOVED, ASPHALT

AB-1
STA 4172+81.75 (I-70 EB), 19.80' RT
INLET ABAND. AND PIPE THRU, A.P.P.
GRATE ELEV 737.51'
12" RCP N 732.89
15" RCP E 731.03

D-35
STA 4173+00.03 (I-70 EB), 74.86' RT
CB-8, GRATE ELEV 744.72
15" (W) 734.02
15" (E) 724.10
18" (S) 723.85
6" UD (S) 742.85



END AREA	
CUT	FILL
111	[2006] △4

VOLUME	
CUT	FILL
231	[3921] △4
210	[3511] △4
116	[1786] △4
441	[7432] △4

CALCULATED ATR
CHECKED CWL

CROSS SECTIONS I-70 EASTBOUND
STA. 4172+50.00 TO STA. 4173+00.00

FRA-70/71-12.68/14.86

399
1815

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SEEDING	
END WIDTH	SQ. YDS.
	108
	21
	119
	22
	227

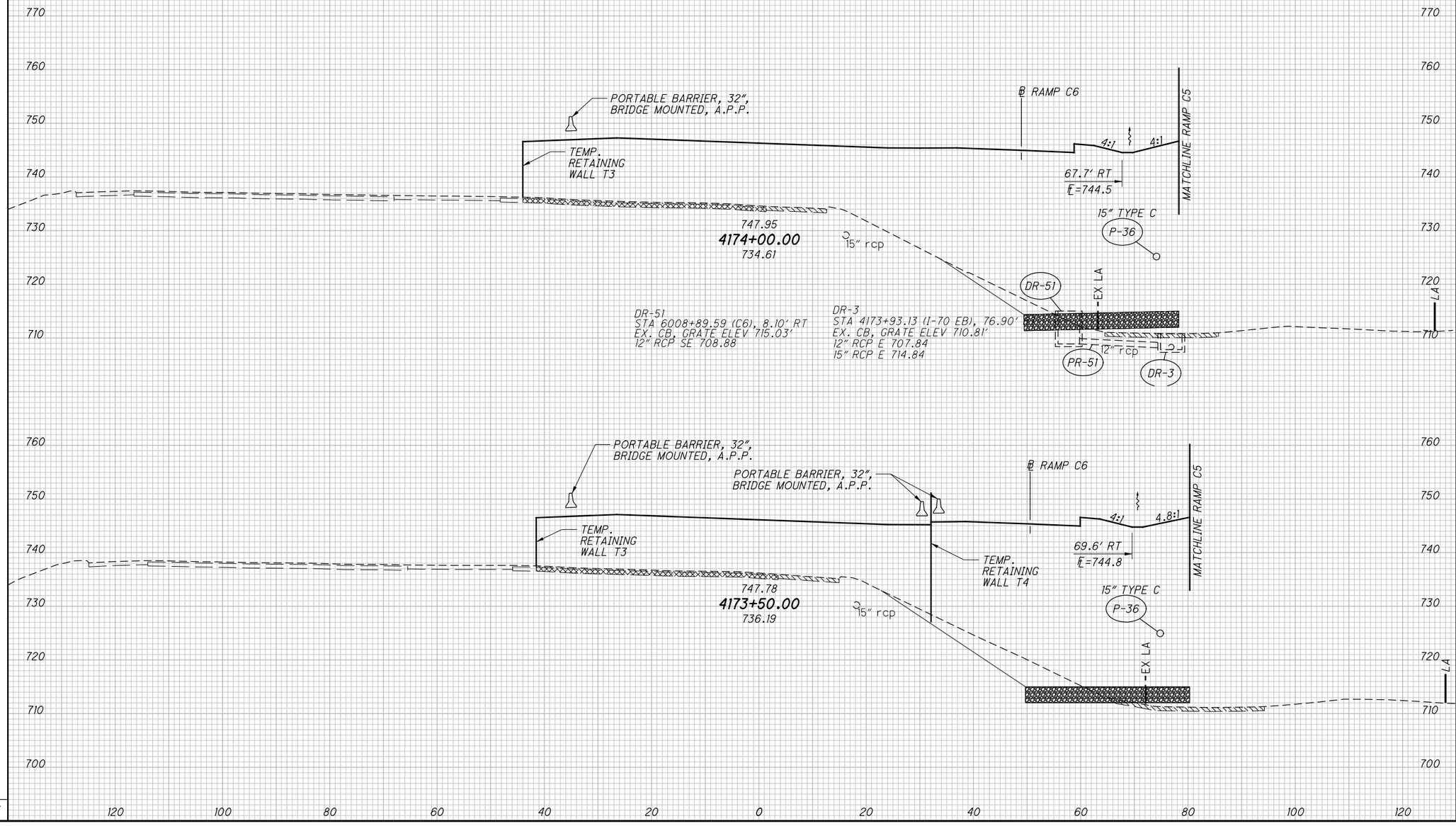
NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	ATR	11-29-2021

[#] ITEM 203 - GRANULAR EMBANKMENT

LOAD TRANSFER PLATFORM (INCLUDED WITH RETAINING WALL ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS)

ITEM 202 - PAVEMENT REMOVED

ITEM 202 - PAVEMENT REMOVED, ASPHALT



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		110	[4422] 4
56	[2340] 4		
		180	[4231] 4
		138	[2229] 4
		290	[8653] 4

CALCULATED ATR
CHECKED CWL

CROSS SECTIONS I-70 EASTBOUND
STA. 4173+50.00 TO STA. 4174+00.00

FRA-70/71-12.68/14.86

400
1815

NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	ATR	11-29-2021

SEEDING

END WIDTH	SQ. YDS.
	89
15	
	92
18	
	181

4 [#] ITEM 203 - GRANULAR EMBANKMENT

"#" ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN

LOAD TRANSFER PLATFORM
(INCLUDED WITH RETAINING WALL
ITEM 203 - ROADWAY, MISC.: COLUMN
SUPPORTED WALLS)

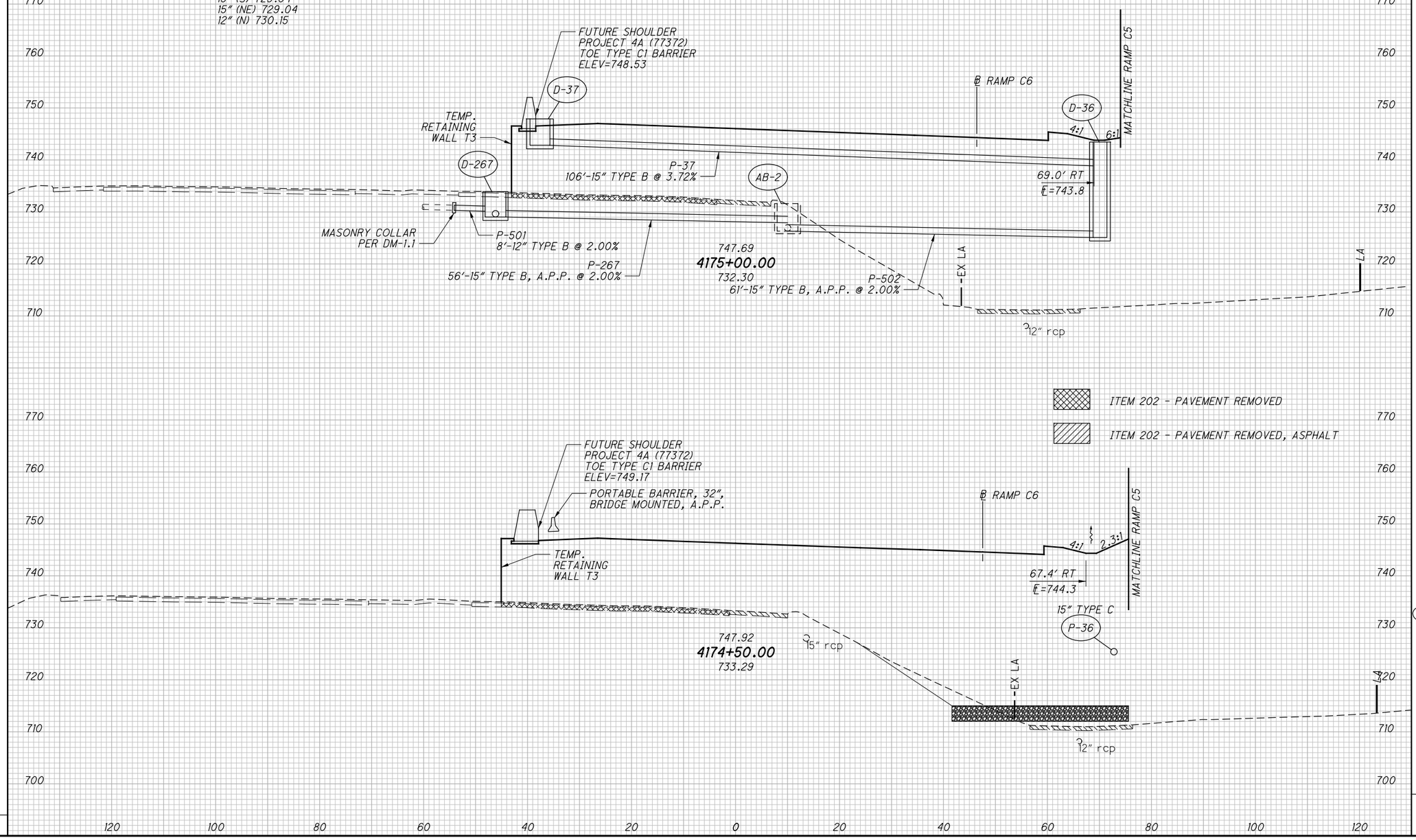
SUSPEND ITEM 203 - GRANULAR EMBANKMENT
START ITEM 203 - GRANULAR EMBANKMENT, A.P.P.
STA. 4175+43.32

D-267
STA 4174+99.46 (I-70 EB), 46.17' LT
MH-3, RIM ELEV 733.90
15" (S) 729.04
15" (NE) 729.04
12" (N) 730.15

D-37
STA 4175+16.35 (I-70 EB), 36.95' LT
I-3-C1, A.P.P.
GRATE ELEV 747.91
15" (S) 742.81
6" UD (W) 745.20
6" UD (E) 745.00

AB-2
STA 4175+04.27 (I-70 EB), 10.27' RT
INLET ABAND. AND PIPE THRU, A.P.P.
GRATE ELEV 731.63
EX. 15" RCP E 726.30
EX. 15" RCP W 726.63
15" (N) 727.91
15" (S) 726.30

D-36
STA 4175+14.90 (I-70 EB), 70.11' RT
CB-8, GRATE ELEV 743.45
15" (NW) 725.08
15" (N) 738.87
15" (W) 725.08
6" UD (N) 740.12



ITEM 202 - PAVEMENT REMOVED

ITEM 202 - PAVEMENT REMOVED, ASPHALT

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		0	"1991" 4
	4		
0	"2590"		
0	[2590] 4		
		0	[4156] 4
0	[2590] 4		
		58	[4654] 4
		63	[2436] 4
		4	"2007"
		58	[8810]

CALCULATED ATR
CHECKED CWL

CROSS SECTIONS I-70 EASTBOUND
STA. 4174+50.00 TO STA. 4175+00.00

FRA-70/71-12.68/14.86

401
1815

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SEEDING	
END WIDTH	SQ. YDS.
	120
0	AH
9	BK
	32
10	
	32

NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	ATR	11-29-2021

ITEM 202 - PAVEMENT REMOVED

ITEM 202 - PAVEMENT REMOVED, ASPHALT

"#" ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN

SUSPEND SEEDING

SUSPEND EARTHWORK
END ITEM 203 - GRANULAR EMBANKMENT, A.P.P.
STA. 4175+93.84

SEE PROJECT FRA-70-13.10 (89464)

TEMP. RETAINING WALL T3

MATCHLINE RAMP C5

25:1

67.0' RT
℄=744.3

SR-1
STA 10+67.92, 50.20' LT
EX. SAN MH, GRATE ELEV 711.44
EX. 18" VCP N 696.85
EX. 18" VCP S 696.88

746.73
4175+93.84
724.75
DR-2

SR-2
STA 11+02.45, 36.09' LT
EX. SAN MH, GRATE ELEV 711.77
EX. 18" VCP N 696.72
EX. 18" VCP S 696.67

DR-22
STA 5080+31.01 (C5), 6.53' RT
EX. CB, GRATE ELEV 710.45'
12" RCP SE 707.54

DR-2
STA 4176+00.65 (I-70 EB), 3.30' RT
EX. MH, GRATE ELEV 723.81
15" RCP W 706.32

SR-3
STA 11+33.92, 35.22' LT
EX. SAN MH, GRATE ELEV 711.80
EX. 18" RCP S 696.50
EX. 8" DIP W 700.76
EX. 12" SE 702.60
EX. 18" E 711.80

SR-5
STA 11+31.55, 41.79' LT
EX. SAN MH, GRATE ELEV 711.74
EX. 8" DIP N 701.25
EX. 8" VCP E 700.44

EX LA

SR-3 SR-5 SR-2 DR-22 SR-1

LA

END APPROACH SLAB (SKEW)
746.79
175+92.88
724.77
(FUTURE I-70 EB)

18" rcp

18" vcp

SEE PROJECT FRA-70-13.10 (89464)

DR-53
STA 4175+60.00 (I-70 EB), 2.47' RT
EX. INLET, GRATE ELEV 731.86'
15" RCP E 725.61
15" RCP W 725.91

TEMP. RETAINING WALL T3

MATCHLINE RAMP C5

25:1

66.9' RT
℄=744.2

747.08
4175+63.91
731.06
DR-53

DR-5
STA 4175+77.80 (I-70 EB), 26.88' RT
EX. MH, GRATE ELEV 711.55
15" RCP SW 707.20

DR-4
STA 4175+67.29 (I-70 EB), 41.15' RT
EX. CB, GRATE ELEV 711.04'
15" RCP NE 707.44
12" RCP W 707.42

DR-5 DR-4

EX LA

LA

BEGIN APPROACH SLAB (SKEW)
747.16
175+62.88
731.15
(FUTURE I-70 EB)

15" rcp

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	"0"		
0	"2986"		
		0	"3113"
		0	"2631"
		0	"3113"

CALCULATED ATR
CHECKED CWL

CROSS SECTIONS I-70 EASTBOUND
STA. 4175+63.96 TO STA. 4175+93.88

FRA-70/71-12.68/14.86

402
1815

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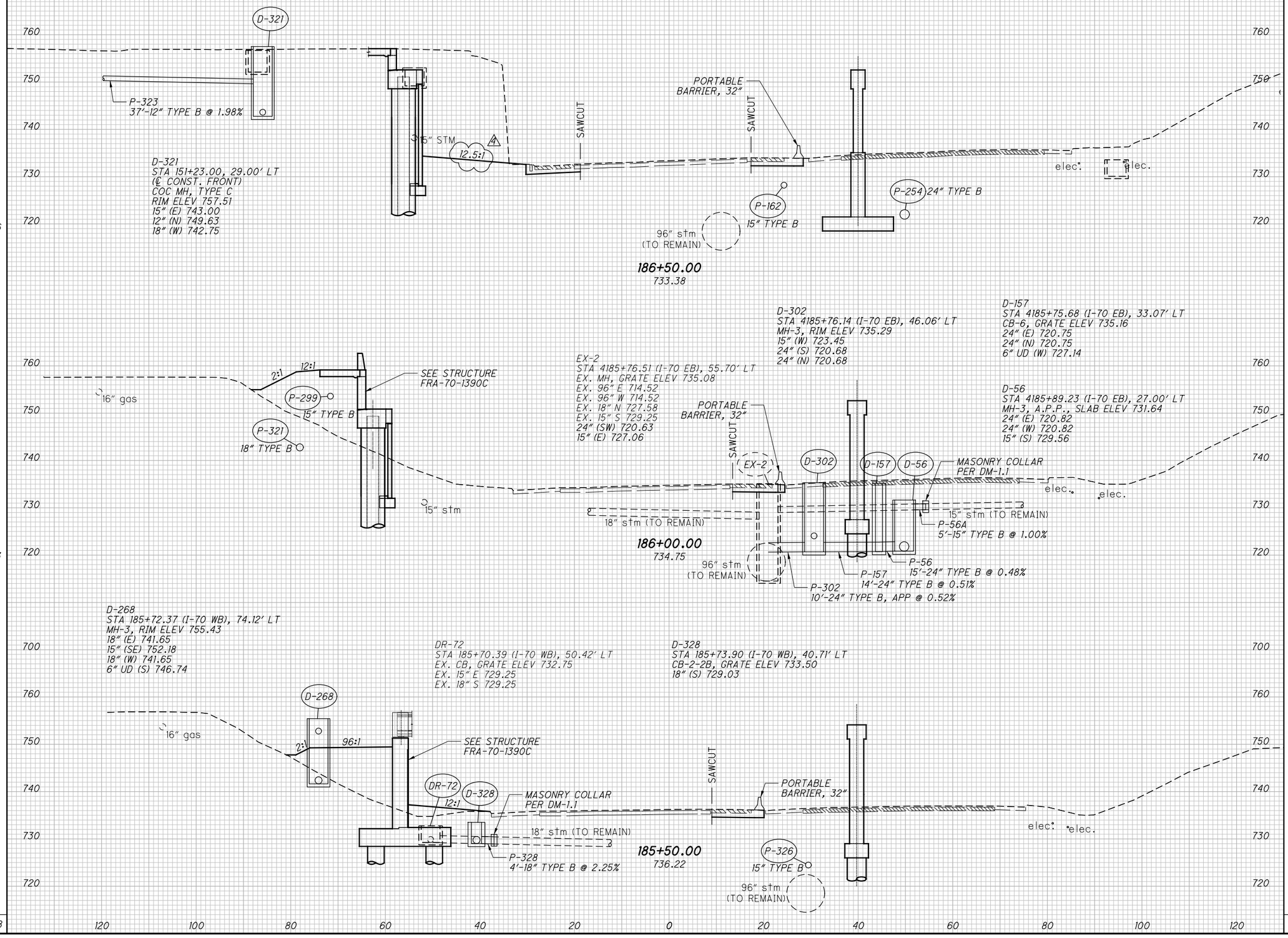
NO.	DESCRIPTION	REV. BY	DATE
4	GRADING LINE	CWL	11-29-2021

SEEDING END WIDTH	SEEDING SQ. YDS.
	139
23	
	106
15	
	153
40	
	398



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		898	1
416	1		
		396	184
12	198		
22	355		
12	185		
		1316	540

CALCULATED TMT
CHECKED CWL

CROSS SECTIONS I-70 WESTBOUND
STA. 185+50.00 TO STA. 186+50.00

FRA-70/71-12.68/14.86

427
1815

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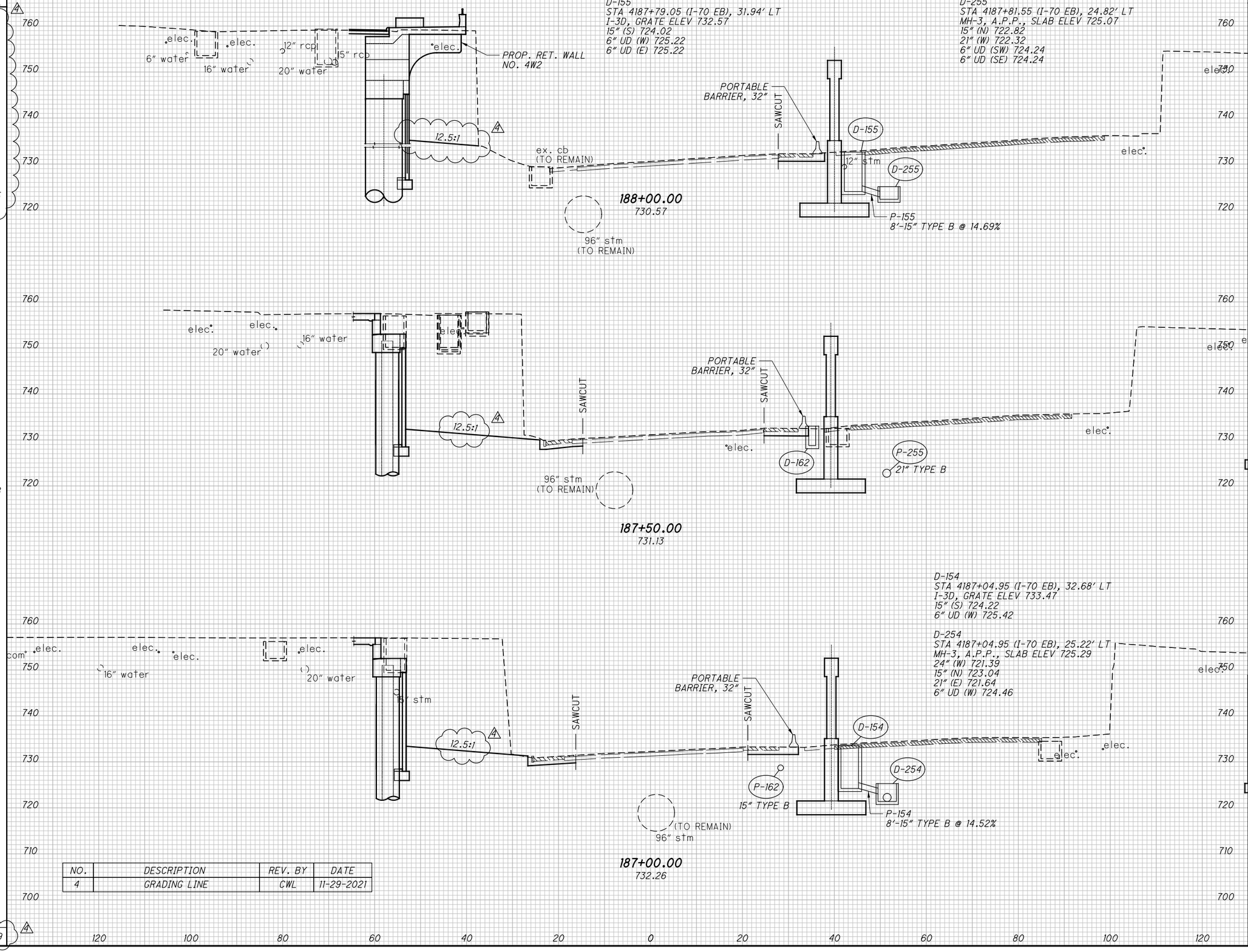
SEEDING	
END WIDTH	SQ. YDS.
	56
15	
	125
30	
	158
27	
	339



NO.	DESCRIPTION	REV. BY	DATE
4	GRADING LINE	CWL	11-29-2021

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		10	0
11	0		
		645	0
686	0		
		1148	0
554	0		
		1803	0

CALCULATED TMT
CHECKED CWL

CROSS SECTIONS I-70 WESTBOUND
STA. 187+00.00 TO STA. 188+00.00

FRA-70/71-12.68/14.86

428
1815

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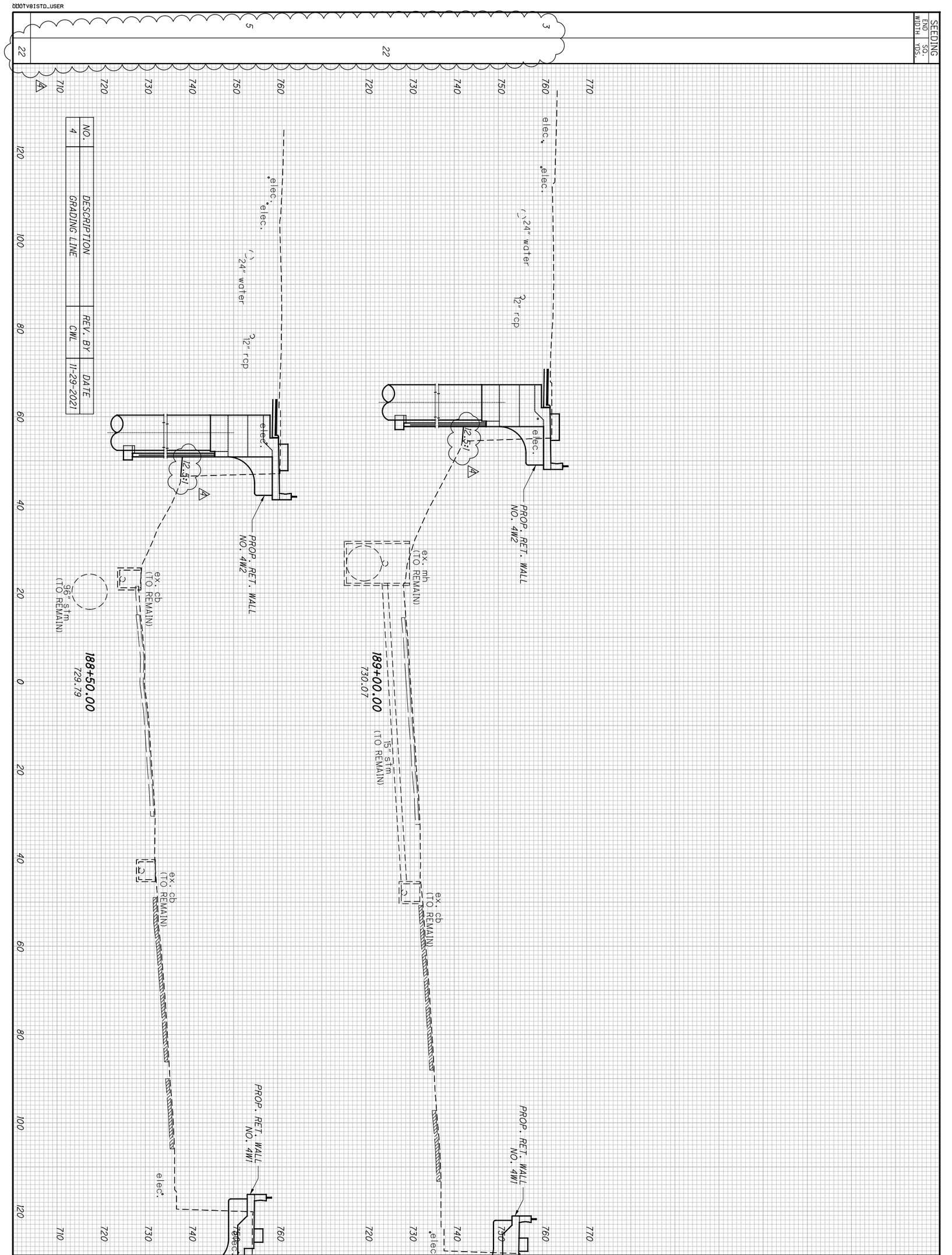

1815 / 429	FRA-70/71-12.68/14.86	CROSS SECTIONS I-70 WESTBOUND STA. 188+50.00 TO STA. 189+00.00	CALCULATED TMT / CHECKED CWL

NO.	DESCRIPTION	REV. BY	DATE
1	UPDATED HATCH LEGEND	CWL	11-5-2021
4	EARTHWORK REVISED	ATR	11-29-2021

SEEDING END WIDTH	SEEDING SQ. YDS.
0	
0	
0	
78	267
82	267

GRANULAR BACKFILL, TYPE B (INCLUDED IN WALL QUANTITIES)

LOAD TRANSFER PLATFORM (INCLUDED WITH RETAINING WALL ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS)

ITEM 202 - PAVEMENT REMOVED

ITEM 202 - PAVEMENT REMOVED, ASPHALT

SELECT GRANULAR BACKFILL PER SS840 (INCLUDED IN WALL QUANTITIES)

ITEM 203 - GRANULAR MATERIAL, TYPE C (INCLUDED IN THE WALL QUANTITIES)

"#" ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN

<#> ITEM 203 - EMBANKMENT, AS PER PLAN "A"

RESUME EARTHWORK

MATCHLINE 1-70 EB

PROP. RET. WALL NO. 4W8

BEGIN APPROACH SLAB (SKEW)
750.91
5074+10.30
715.83

LA

U

U TMP

DV-15

P-42

27" TYPE C IN 42" STEEL CASING

AH

SUSPEND SEEDING

BK

SUSPEND EARTHWORK

END APPROACH SLAB (SKEW)
748.95
5071+48.62
713.45

TEMP. RETAINING WALL

2:1

P-42

27" TYPE C IN 42" STEEL CASING

BEGIN APPROACH SLAB (SKEW)
748.39
5071+18.62
713.76

TEMP. RETAINING WALL

2:1

P-42

27" TYPE C IN 42" STEEL CASING

760 750 740 730 720 710

120 100 80 60 40 20 0 20 40 60 80 100 120

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		99	"633"
	"0"		
20	<0>		
0	<0>		
0	<0>		
0	<1258>		
0	<2265>		
		99	"633" <1258>

CALCULATED ATR

CHECKED CWL

CROSS SECTIONS - RAMP C5
STA. 5071+18.62 TO STA. 5074+10.30

FRA-70/71-12.68/14.86

485
1815

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NO.	DESCRIPTION	REV. BY	DATE
1	UPDATED HATCH LEGEND	CWL	11-5-2021
4	EARTHWORK REVISED	ATR	11-29-2021

SEEDING	
END WIDTH	SQ. YDS.
	0
0	
	0
	0

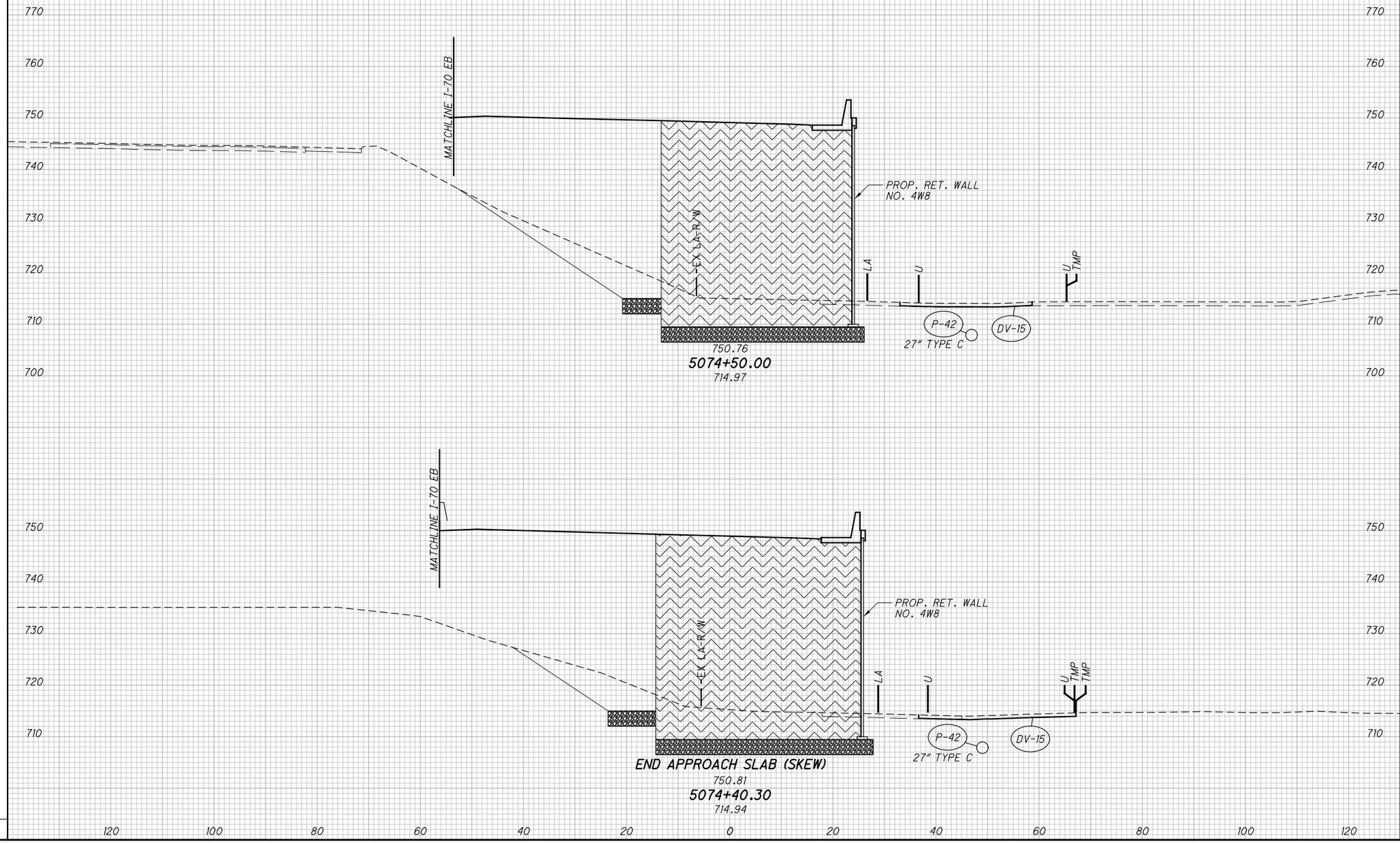
ITEM 202 - PAVEMENT REMOVED

ITEM 202 - PAVEMENT REMOVED, ASPHALT

4 "#" ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN

SELECT GRANULAR BACKFILL PER SS840 (INCLUDED IN WALL QUANTITIES)

1 LOAD TRANSFER PLATFORM (INCLUDED WITH RETAINING WALL ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS)



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		220	"1219" 4
	4 175 "1049"		
		4 60	"393"
	4 159 "1140"		
		4 280	"1612"

CALCULATED ATR

CHECKED CWL

CROSS SECTIONS - RAMP C5
STA. 5074+40.30 TO STA. 5074+50.00

FRA-70/71-12.68/14.86

486
1815

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SEEDING	
END WIDTH	SQ. YDS.
	56
5	
	28
5	
0	
	84

NO.	DESCRIPTION	REV. BY	DATE
1	UPDATED HATCH LEGEND	CWL	11-5-2021
4	EARTHWORK REVISED	ATR	11-29-2021

ITEM 202 - PAVEMENT REMOVED

ITEM 202 - PAVEMENT REMOVED, ASPHALT

4 "#" ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN

SELECT GRANULAR BACKFILL PER SS840 (INCLUDED IN WALL QUANTITIES)

LOAD TRANSFER PLATFORM (INCLUDED WITH RETAINING WALL ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS) 1

770 760 750 740 730 720 710 700 690

MATCHLINE I-70 EB

EX. LA R/W

PROP. RET. WALL NO. 4W8

LA

U TMP

TMP

DV-15

749.83

5075+50.00

713.74

P-38

27" TYPE C

AH

BK

RESUME SEEDING

MATCHLINE I-70 EB

EX. LA R/W

PROP. RET. WALL NO. 4W8

D-42
STA 5075+00.00 (C5), 35.67' RT
MH-3, RIM ELEV 714.31
12" (NE) 710.62
27" (E) 706.87
27" (W) 706.87
6" UD (N) 707.13

EX-4
STA 5075+09.63 (C5), 31.24' RT
EX. MH, RIM ELEV 713.88
EX. 12" (N) 710.67 (REMOVE)
EX. 12" (S) 710.67
15" (SW) 710.67

LA

EX-4

D-42

U TMP

TMP

12" sTm (TO BE REMOVED)

10" sTm (TO BE ABAND)

10" sTm

DV-15

750.39

5075+00.00

714.25

120 100 80 60 40 20 0 20 40 60 80 100 120

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		72	2 "482" 4
	43 "263" 4		
		98	4 "491"
	63 "267" 4		
		170	4 2 "973"

CALCULATED ATR

CHECKED CWL

CROSS SECTIONS - RAMP C5
STA. 5075+00.00 TO STA. 5075+50.00

FRA-70/71-12.68/14.86

487
1815

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NO.	DESCRIPTION	REV. BY	DATE
1	UPDATED HATCH LEGEND	CWL	11-5-2021
4	EARTHWORK REVISED	ATR	11-29-2021

SELECT GRANULAR BACKFILL PER SS840 (INCLUDED IN WALL QUANTITIES)

ITEM 202 - PAVEMENT REMOVED

LOAD TRANSFER PLATFORM (INCLUDED WITH RETAINING WALL ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS)

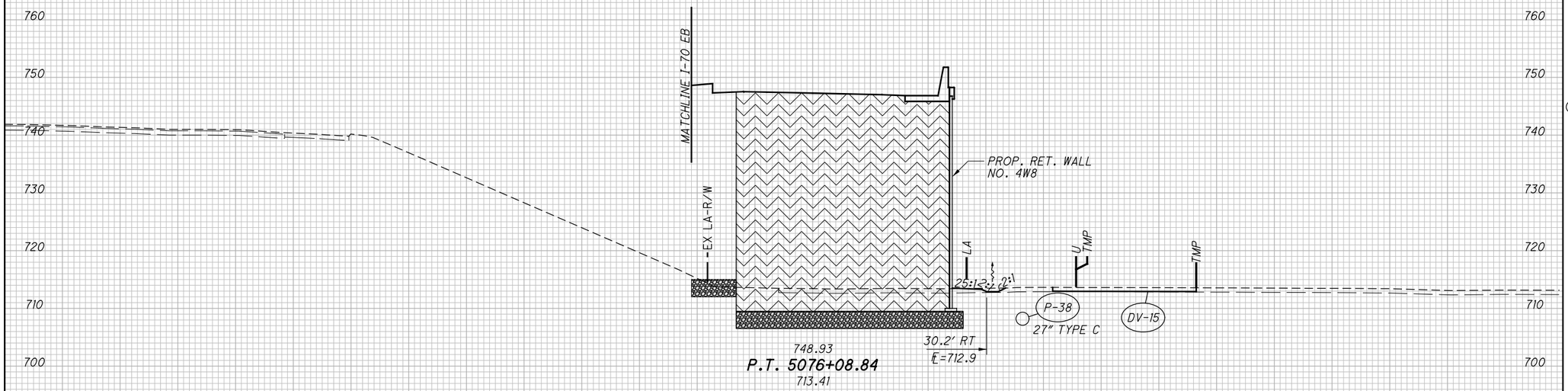
ITEM 202 - PAVEMENT REMOVED, ASPHALT

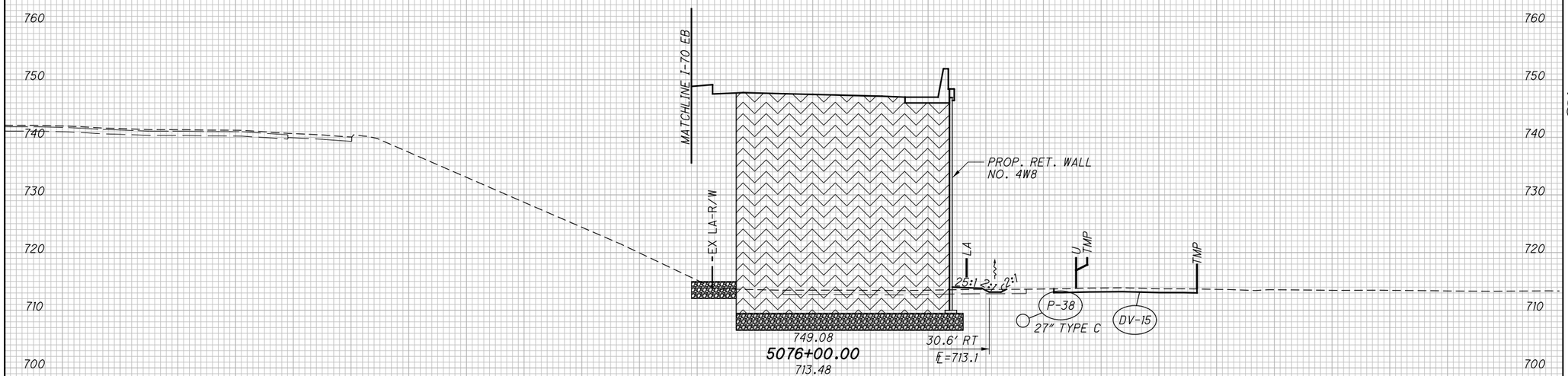
"#" ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN

[#] ITEM 203 - GRANULAR EMBANKMENT

AH

END ITEM 203 - GRANULAR EMBANKMENT, A.P.P. BK
STA. 5076+10.84





SEEDING END WIDTH	SEEDING SQ. YDS.
	69
15	
	15
15	
	84

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		54	[386] 4
	[256] "256" 4		"19"
36	4 "256"		
		12	4 "84"
	4 2 35 "258"		
		4 "103" 66	[386]

CALCULATED ATR
CHECKED CWL

CROSS SECTIONS - RAMP C5
STA. 5076+00.00 TO STA. 5076+08.84

FRA-70/71-12.68/14.86

488
1815

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SEEDING	
END WIDTH	SQ. YDS.
	136
27	
	117
15	
	253

NO.	DESCRIPTION	REV. BY	DATE
1	UPDATED HATCH LEGEND	CWL	11-5-2021
4	EARTHWORK REVISED	ATR	11-29-2021

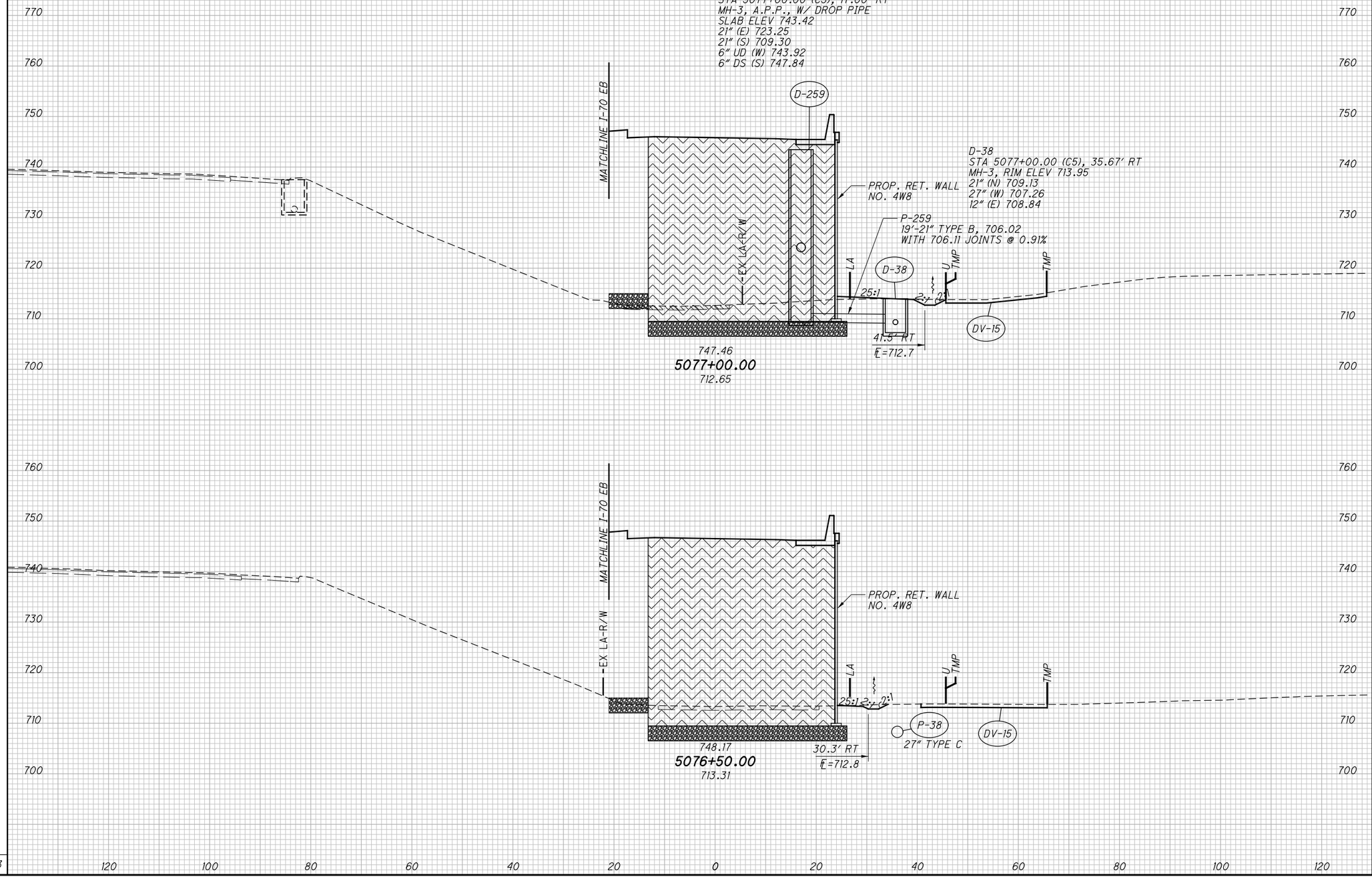
[#] ITEM 203 - GRANULAR EMBANKMENT

ITEM 202 - PAVEMENT REMOVED

ITEM 202 - PAVEMENT REMOVED, ASPHALT

SELECT GRANULAR BACKFILL PER SS840 (INCLUDED IN WALL QUANTITIES)

LOAD TRANSFER PLATFORM (INCLUDED WITH RETAINING WALL ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS)



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		41 [451]	13
	21 [245]		4
			52 [458]
		35 [250]	
		93 [909]	17

CALCULATED ATR

CHECKED CWL

CROSS SECTIONS - RAMP C5
STA. 5076+50.00 TO STA. 5077+00.00

FRA-70/71-12.68/14.86

489
1815

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SEEDING	
END WIDTH	SQ. YDS.
	103
19	
	114
22	
	217

NO.	DESCRIPTION	REV. BY	DATE
1	UPDATED HATCH LEGEND	CWL	11-5-2021
4	EARTHWORK REVISED	ATR	11-29-2021

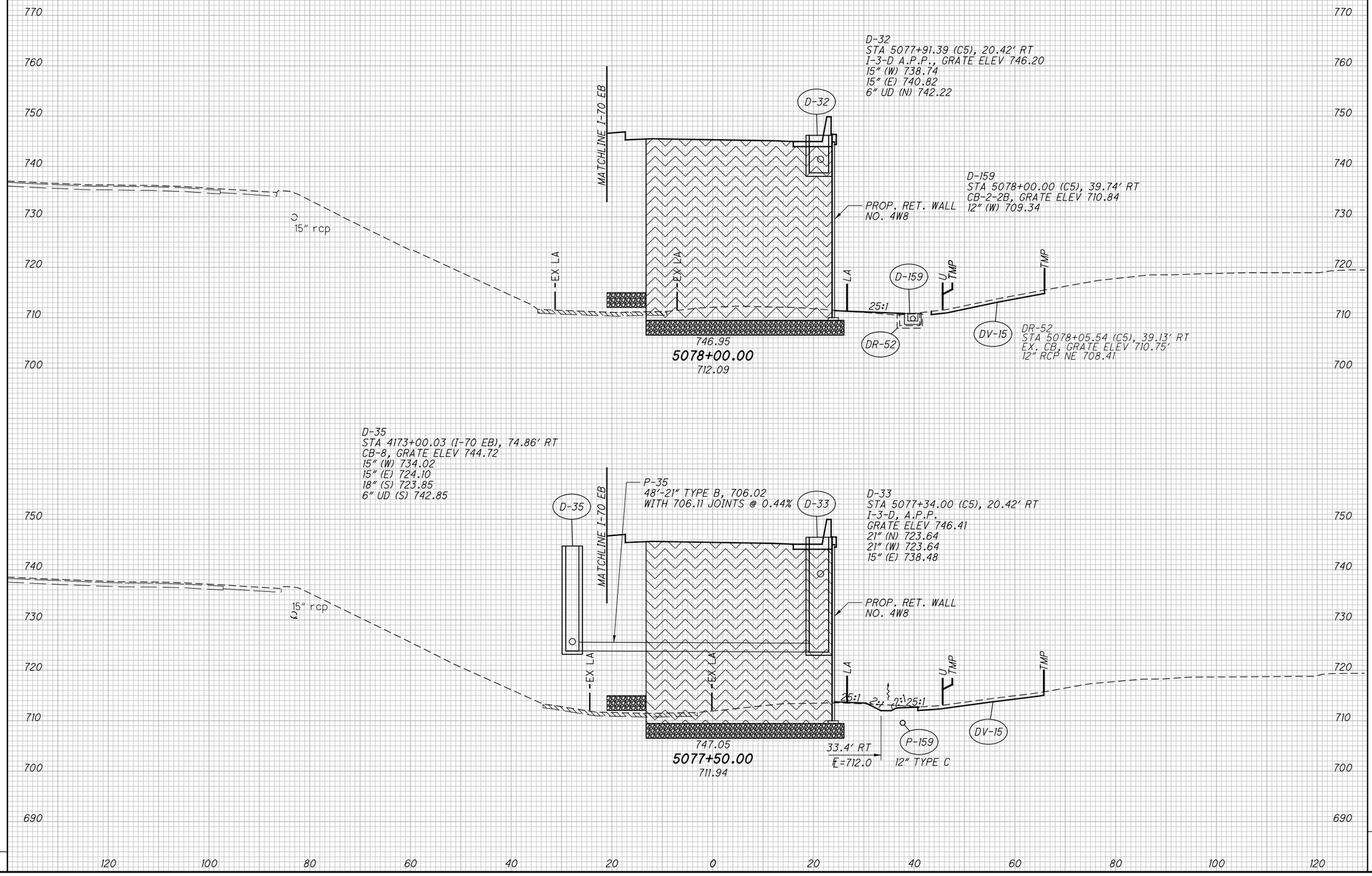
[#] ITEM 203 - GRANULAR EMBANKMENT

ITEM 202 - PAVEMENT REMOVED

ITEM 202 - PAVEMENT REMOVED, ASPHALT

SELECT GRANULAR BACKFILL PER SS840 (INCLUDED IN WALL QUANTITIES)

LOAD TRANSFER PLATFORM (INCLUDED WITH RETAINING WALL ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS)



END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	ATR	CWL
			26		
		33	[449]		
			4		
			15		
		15	[242]		
			4		
			23		
		35	[448]		
			4		
			10		
		23	[242]		
			4		
			49		
		68	[897]		

CROSS SECTIONS - RAMP C5
STA. 5077+50.00 TO STA. 5078+00.00

FRA-70/71-12.68/14.86

SEEDING	
END WIDTH	SQ. YDS.
	22
	17
	97
	119

NO.	DESCRIPTION	REV. BY	DATE
1	UPDATED HATCH LEGEND	CWL	11-5-2021
4	EARTHWORK REVISED	ATR	11-29-2021

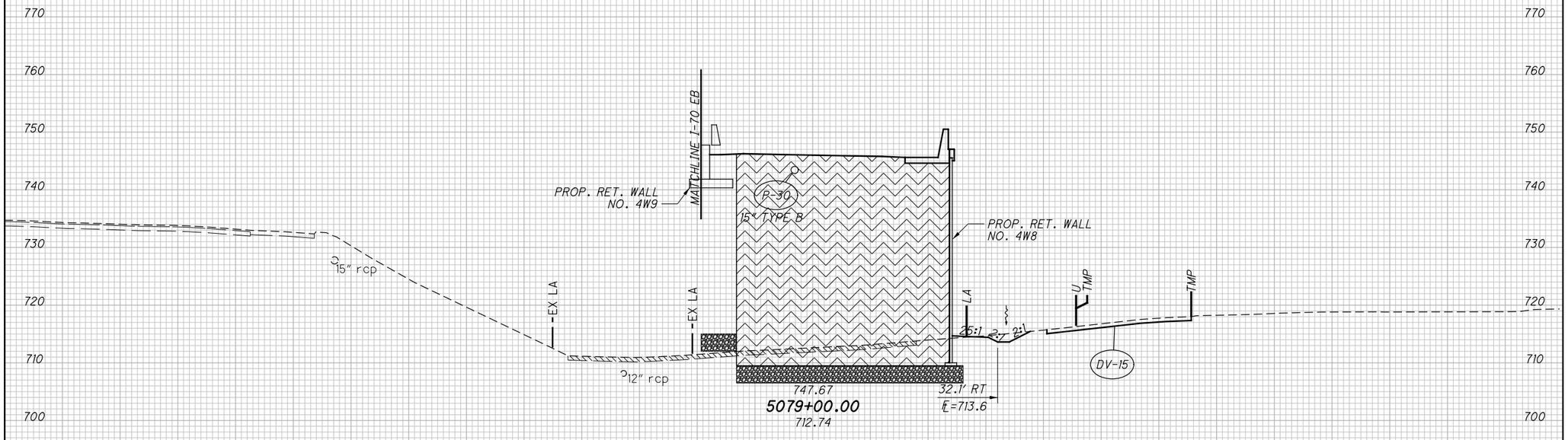
[#] ITEM 203 - GRANULAR EMBANKMENT

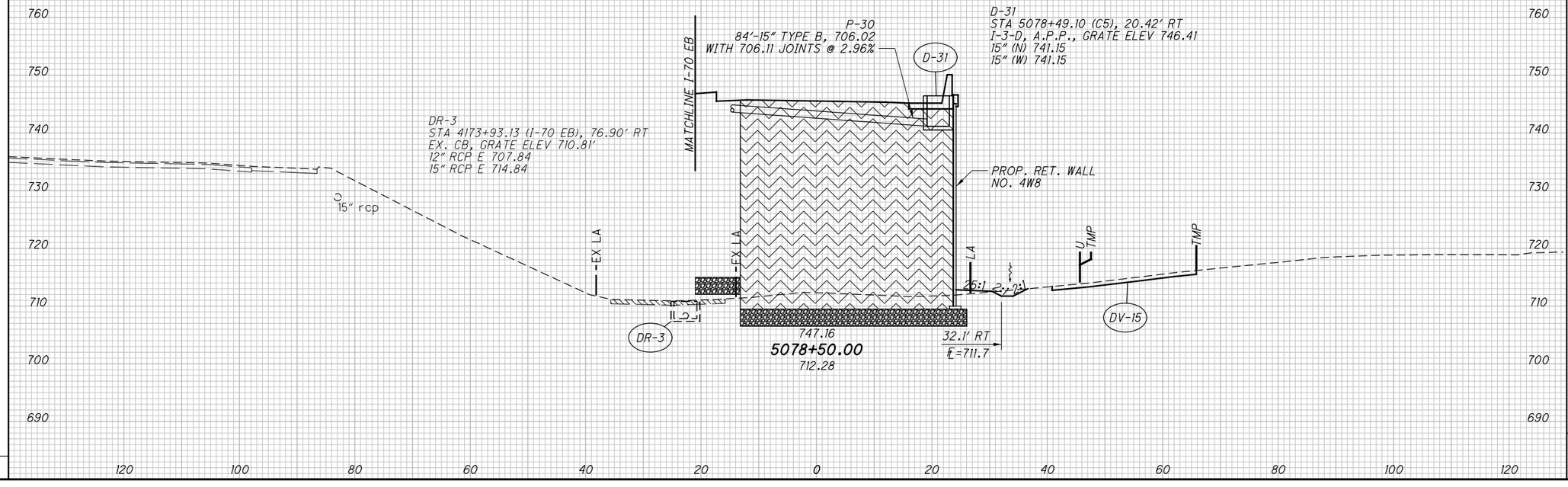
ITEM 202 - PAVEMENT REMOVED

ITEM 202 - PAVEMENT REMOVED, ASPHALT

SELECT GRANULAR BACKFILL PER SS840 (INCLUDED IN WALL QUANTITIES)

LOAD TRANSFER PLATFORM (INCLUDED WITH RETAINING WALL ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS)





END AREA		VOLUME	
CUT	FILL	CUT	FILL
		11	5 [84]
	24 [177]		
		42	19 [389]
		21	13 [243]
		53	24 [473]

CALCULATED ATR
CHECKED CWL

CROSS SECTIONS - RAMP C5
STA. 5078+50.00 TO STA. 5079+00.00

FRA-70/71-12.68/14.86

491
1815

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SEEDING	
END WIDTH	SQ. YDS.
	57
10	
	50
14	
	107

NO.	DESCRIPTION	REV. BY	DATE
1	UPDATED HATCH LEGEND	CWL	11-5-2021
4	EARTHWORK REVISED	ATR	11-29-2021

SELECT GRANULAR BACKFILL PER SS840 (INCLUDED IN WALL QUANTITIES)

ITEM 202 - PAVEMENT REMOVED

LOAD TRANSFER PLATFORM (INCLUDED WITH RETAINING WALL ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS)

ITEM 202 - PAVEMENT REMOVED, ASPHALT

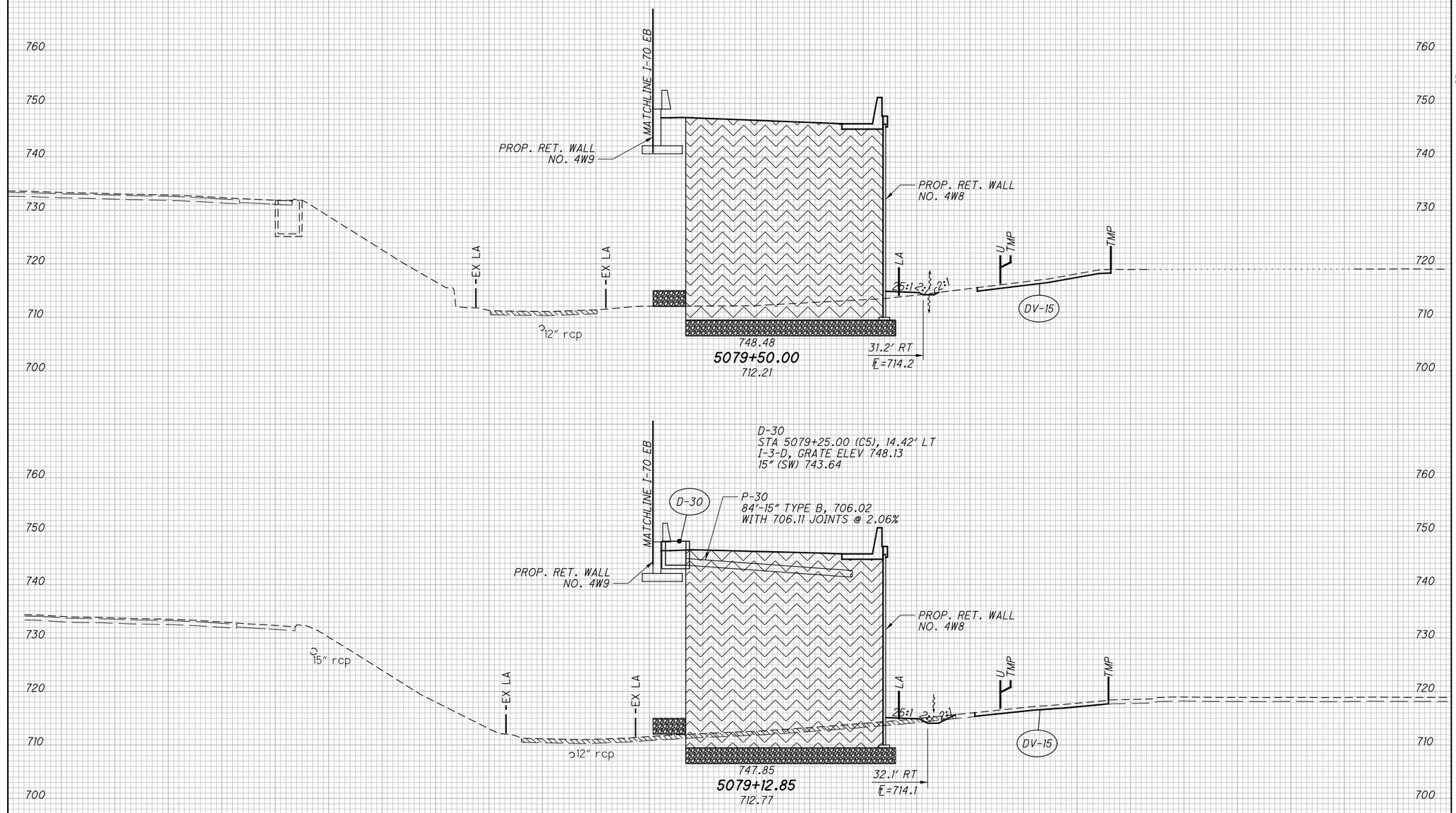
"#" ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN

[#] ITEM 203 - GRANULAR EMBANKMENT

SUSPEND ITEM 203 - GRANULAR EMBANKMENT
START ITEM 203 - GRANULAR EMBANKMENT, A.P.P.
STA. 5079+95.31

AH

BK



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		33	"32"
	"183"		
	[183]		
			[307]
6			
18	[183]		
			13
		28	[248]
		13	
		22	[178]
		13	"32"
		61	[555]

CALCULATED ATR
CHECKED CWL

CROSS SECTIONS - RAMP C5
STA. 5079+12.85 TO STA. 5079+50.00

FRA-70/71-12.68/14.86

492
1815

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NO.	DESCRIPTION	REV. BY	DATE
1	UPDATED HATCH LEGEND	CWL	11-5-2021
4	EARTHWORK REVISED	ATR	11-29-2021

SEEDING END WIDTH	SEEDING SQ. YDS.
	63
28	
	34
11	
97	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		34	2
42	4 2		
		18	4 3
AH 18	4 9		
BK 18	9 "188" 4		
52	4 5		

CALCULATED ATR
CHECKED CWL

ITEM 202 - PAVEMENT REMOVED

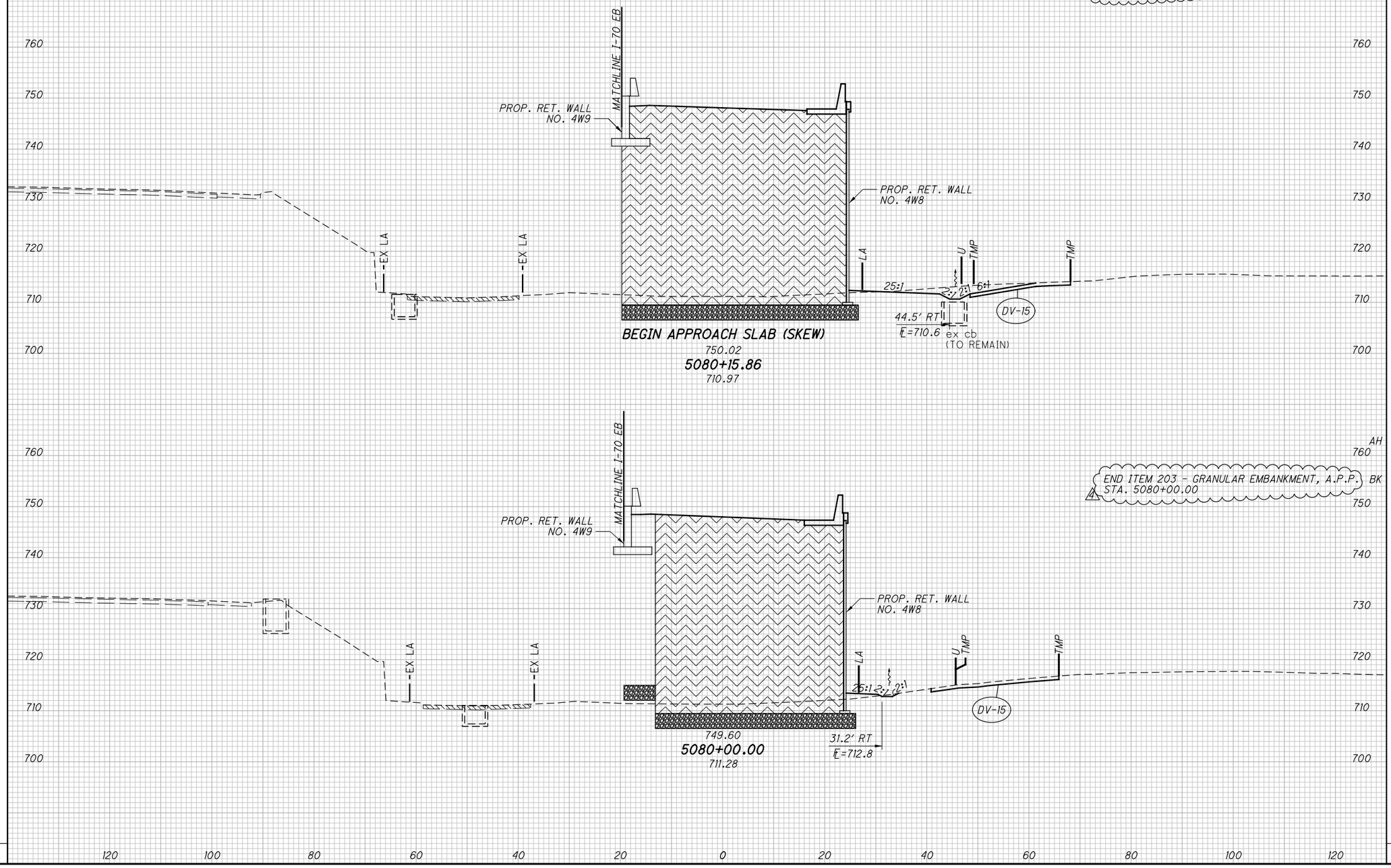
ITEM 202 - PAVEMENT REMOVED, ASPHALT

4 "#" ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN

SELECT GRANULAR BACKFILL PER SS840 (INCLUDED IN WALL QUANTITIES)

LOAD TRANSFER PLATFORM (INCLUDED WITH RETAINING WALL ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS) 1

END ITEM 203 - GRANULAR EMBANKMENT, A.P.P. STA. 5080+00.00 4



CROSS SECTIONS - RAMP C5
STA. 5080+00.00 TO STA. 5080+15.86

FRA-70/71-12.68/14.86

493
1815

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11/24/2021
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ODOTV8I5TD_USER

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
'53'	'53'
44	2

VOLUME	
CUT	FILL
'104'	'104'
83	52

CALCULATED TMT

CHECKED CWL

D-354 (DR-354)
STA 21+62.24 (FULTON), 0.95' LT
COC MH, TYPE C
PROP RIM ELEV 764.16
EX. MH, RIM ELEV 764.68
EX. 6" PVC S 757.89
EX. 12" RCP W 756.72
EX. 12" RCP N 757.68
12" (SW) 756.72

TMP
F/BUILDING
EX R/W
EX LA
SEE STRUCTURE WALL 4W2
elec.
(TO REMAIN)
24" water
(TO REMAIN)
12"
D-354
DR-354
763.73
21+50.00
764.24
P-327
12" COC PIPE W/912
P-314
12" COC PIPE W/912
RETAINING WALL 4W2
EX LA-R/W

TMP
MEET EXISTING
46.6' LT
4.23 %
EL 764.29
41.5' LT
1.56 %
EL 764.22
37.5' LT
4.23 %
elec. mh.

DV-3 COMM. CONCRETE DRIVE LT.
763.31
21+37.66
763.80

LEFT DOOR CHECK
762.84
21+24.00
763.37

NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	TMT	11-29-2021

ITEM 202 - PAVEMENT REMOVED, ASPHALT
ITEM 204 - EXCAVATION OF SUBGRADE
ITEM 204 - GRANULAR MATERIAL, TYPE B
'#' ITEM 204 - EXCAVATION OF SUBGRADE & GRANULAR MATERIAL, TYPE B

CROSS SECTIONS FULTON ST.
STA. 21+24.00 TO STA. 21+50.00

FRA-70/71-12.68/14.86

510
1815

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SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL
'108'	'108'
73	108 (4)

CALCULATED TMT
CHECKED CWL

ITEM 202 - PAVEMENT REMOVED, ASPHALT

ITEM 204 - EXCAVATION OF SUBGRADE
ITEM 204 - GRANULAR MATERIAL, TYPE B

'#' ITEM 204 - EXCAVATION OF SUBGRADE & GRANULAR MATERIAL, TYPE B

NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	TMT	11-29-2021

D-314
STA 22+00.00, 17.00' RT
(℄ CONST. FULTON)
COC CB AA-S133A
GRATE ELEV 765.15
12" (W) 760.78
12" (E) 760.78
4" UD (E) 762.15

780
775
770
765
760
755
750
745
740
735

TMP
F/BUILDING
EX R/W
elec. (TO REMAIN)
elec. (TO REMAIN)
12"
24" water (TO REMAIN)
elec. (TO REMAIN)
765.42
22+00.00
765.90
D-314
EX LA
elec.
SEE STRUCTURE WALL 4W2
RETAINING WALL 4W2
EX LA-R/W

'59'	'59'
45	54 (4)

'108'	'108'
73	108 (4)

CROSS SECTIONS FULTON ST.
STA. 22+00.00

FRA-70/71-12.68/14.86

511
1815

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SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL
'107'	'107'
67	61

CALCULATED TMT

CHECKED CWL

60 50 40 30 20 10 0 10 20 30 40 50 60

780 775 770 765 760 755 750 745 740

TMP F'/BUILDING

EX R/W

EX LA

SEE STRUCTURE WALL 4W2

RETAINING WALL 4W2

EX LA-R/W

12"

elec. (TO REMAIN)

elec. (TO REMAIN)

24" water (TO REMAIN)

767.45

22+50.00

767.68

P-313

12" COC PIPE W/912

elec. mh. (AEP)

ITEM 202 - PAVEMENT REMOVED, ASPHALT

ITEM 204 - EXCAVATION OF SUBGRADE
ITEM 204 - GRANULAR MATERIAL, TYPE B

'#' ITEM 204 - EXCAVATION OF SUBGRADE & GRANULAR MATERIAL, TYPE B

NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	TMT	11-29-2021

'58'	'58'
33	63

'107'	'107'
67	61

CROSS SECTIONS FULTON ST.
STA. 22+50.00

FRA-70/71-12.68/14.86

512
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SEEDING END WIDTH	SEEDING SQ. YDS.
	44
	8
	52

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		'49'	'49'
		29	20
			4
'27'	'27'		
16			
	6		
	4		
		'35'	'35'
		21	8
			4
'15'	'15'		
'0'	'0'		
9	3		
		'84'	'84'
		50	28
			4

CALCULATED JMB
CHECKED TMT

CROSS SECTIONS LIVINGSTON AVENUE STA. 200+00.00 TO STA. 200+50.00

FRA-70/71-12.68/14.86

514
1815

'#' ITEM 204 - EXCAVATION OF SUBGRADE
ITEM 204 - GRANULAR MATERIAL, TYPE B

DR-56
STA 4184+77.97 (I-70 EB), 50.88' RT
EX. INLET, GRATE ELEV 748.78'
12" RCP N 742.78
12" RCP S 742.63
12" RCP W 742.98
15" RCP E 743.18

MATCHLINE I-70 EB

WALL 4W4

D-306
STA 200+69.74, 9.56' RT
(℄ CONST. LIVINGSTON)
COC MH, TYPE C
RIM ELEV 748.18
12" (NW) 742.59
12" (NE) 744.19
12" (S) 742.59

EX LA-R/W

6:1

ex. mh (TO REMAIN)

MASONRY COLLAR PER DM-1.1

4" gas
(TO BE ABANDONED)

16" gas
(TO BE ABANDONED)

12" rcp

telecom

6" water
(TO REMAIN)

16" GAS
(BY OTHERS)

TELECOM
DUCT BANK

P-306
4'-12" COC PIPE W/912 @ 1.00%

ex. 18" rcp

ELECT.
VAULT

748.03
200+50.00
748.00

MATCHLINE I-70 EB (FRA-70-1390)

D-311
STA 200+22.70, 11.00' RT
(℄ CONST. LIVINGSTON)
COC STANDARD AA-S125A
GRATE ELEV 747.28
12" (E) 743.58
4" UD (E) 744.45
4" UD (W) 744.22

BEGIN UNDERCUT AH
BK

4" gas (TO BE ABANDONED)

6" water
(TO REMAIN

MELP
DUCT BANK

16" GAS
(BY OTHERS)

TELECOM
DUCT BANK

747.34
200+04.62
747.34

NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	TMT	11-29-2021

ITEM 204 - EXCAVATION OF SUBGRADE
ITEM 204 - GRANULAR MATERIAL, TYPE B

ITEM 202 - PAVEMENT REMOVED, ASPHALT

ITEM 202 - PAVEMENT REMOVED

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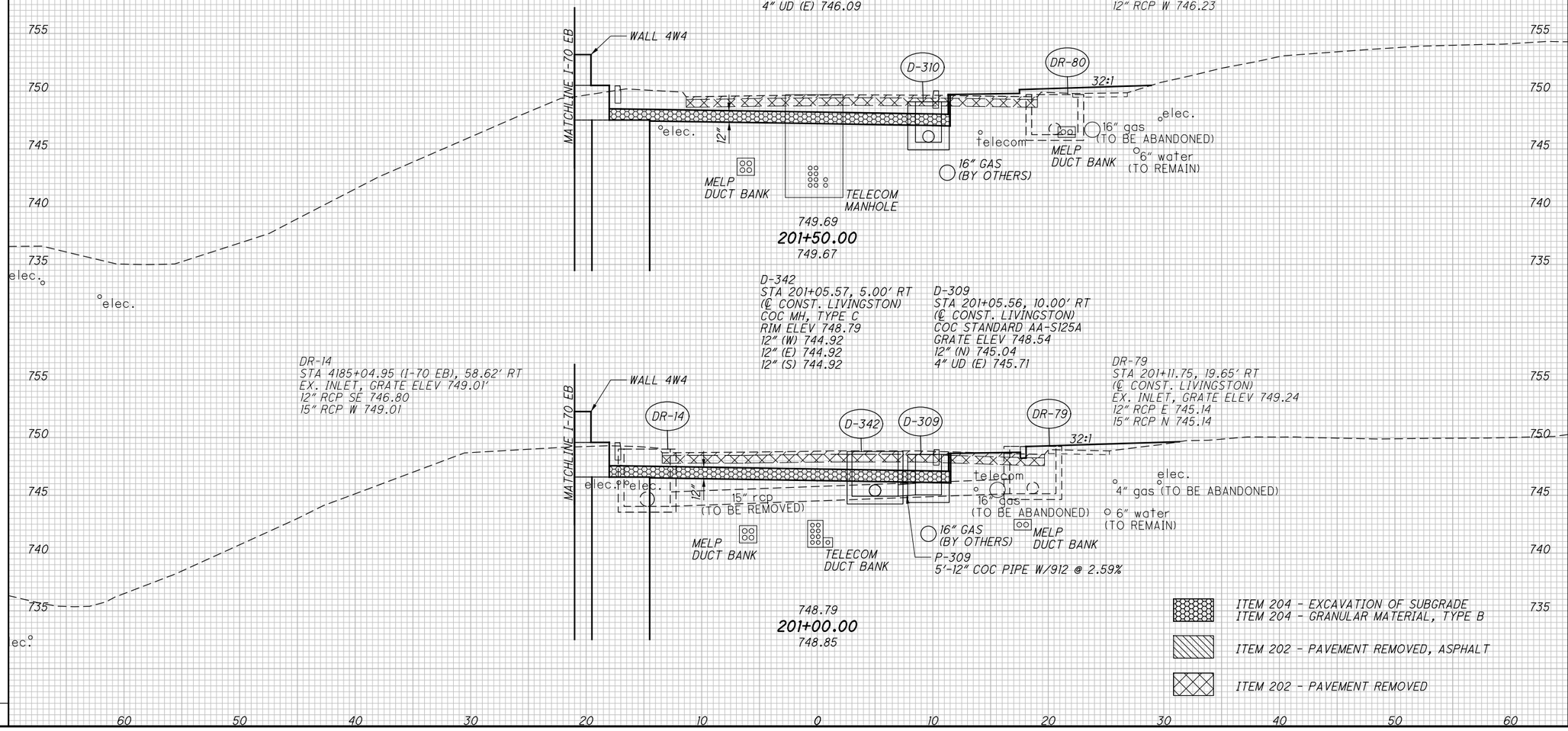
SEEDING END WIDTH	SEEDING SQ. YDS.
	31
11	
	67
13	
	98

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	4	'54'	'54'
		21	28
	4	'29'	'29'
		17	15
	4	'54'	'54'
		30	29
	4	'29'	'29'
		15	16
	4	'108'	'108'
		51	57

CALCULATED JMB
CHECKED TMT

'#' ITEM 204 - EXCAVATION OF SUBGRADE
ITEM 204 - GRANULAR MATERIAL, TYPE B

NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	TMT	11-29-2021



CROSS SECTIONS LIVINGSTON AVENUE STA. 201+00.00 TO STA. 201+50.00

FRA-70/71-12.68/14.86

515
1815

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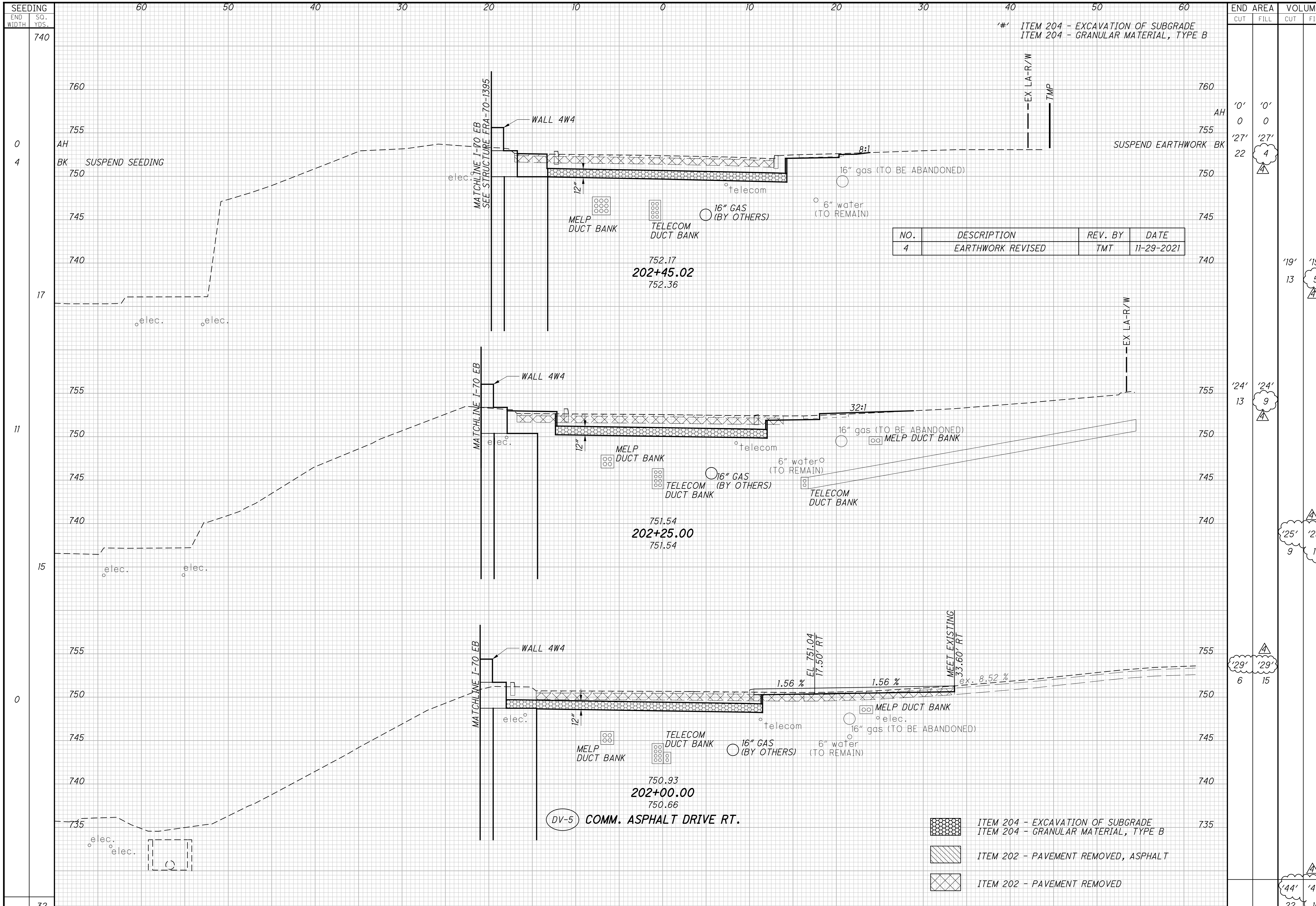

CALCULATED JMB
CHECKED TMT

CROSS SECTIONS LIVINGSTON AVENUE
STA. 202+00.00 TO STA. 202+45.02

FRA-70/71-12.68/14.86

516
1815

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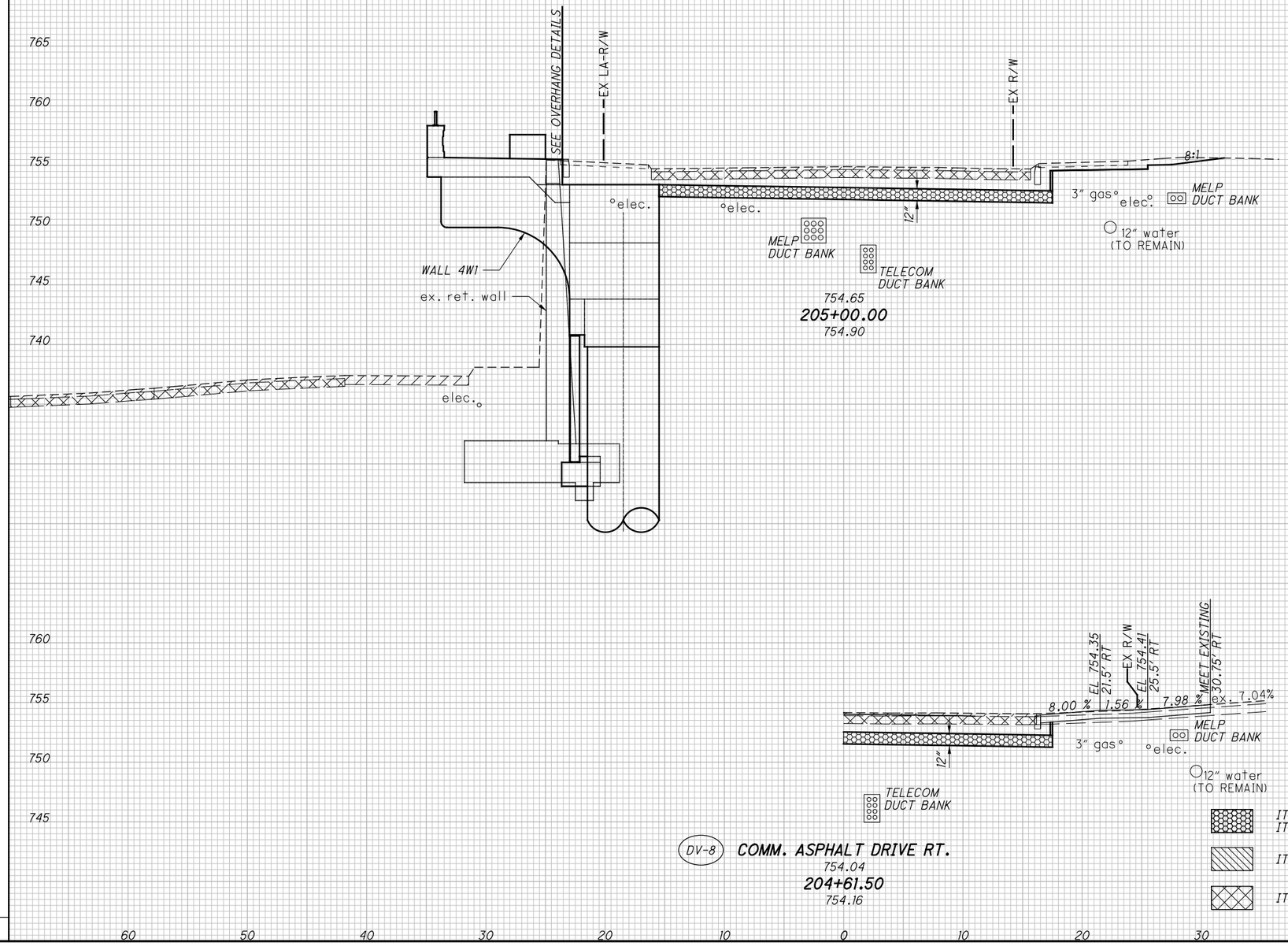
SEEDING	
END WIDTH	SQ. YDS.
	22
6	
	22

'#' ITEM 204 - EXCAVATION OF SUBGRADE
ITEM 204 - GRANULAR MATERIAL, TYPE B

NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	TMT	11-29-2021



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		'63'	'63'
		55	31
			4
'33'	'33'		
32	0		
		'63'	'63'
		55	31
			4

CALCULATED JMB
CHECKED TMT

CROSS SECTIONS LIVINGSTON AVENUE STA. 204+61.50 TO STA. 205+00.00

FRA-70/71-12.68/14.86

518
1815

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SEEDING END WIDTH	SEEDING SQ. YDS.
	17
0	
	6
2	
	23

NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	TMT	11-29-2021

'#' ITEM 204 - EXCAVATION OF SUBGRADE
ITEM 204 - GRANULAR MATERIAL, TYPE B

D-340
STA 206+09.66, 16.00' RT
(℄ CONST. LIVINGSTON)
COC STANDARD AA-S125A
GRATE ELEV 757.29
12" (SW) 753.80
4" UD (E) 754.46

DJ-300
STA 205+82.26, 24.07' RT
MH ADJUSTED TO GRADE, APP
(℄ CONST. LIVINGSTON)
PROP RIM ELEV 756.51'
EX. MH, GRATE ELEV 756.41'
EX. 12" RCP E 751.94 (REMOVE)
EX. 12" (S) 751.91
12" (E) 751.94

DV-9 COMM. CONCRETE DRIVE RT. (SKEW)

757.37
206+00.00
757.47

756.46
205+69.33
756.69

755.89
205+50.00
756.12

MATCHLINE I-70 EB
EX LA-R/W
EX R/W
EX SH
TMP
F/BUILDING
WALL 4W1
ex. ret. wall
elec.
MELP DUCT BANK
TELECOM DUCT BANK
12" water (TO REMAIN)
3" gas
12" COC PIPE W/912
P-340
D-340
DR-300
DJ-300
EL 756.33
22.70' RT
MEET EXISTING
26.85' RT
ex. 9.20%
12" rcp
ex. san. mh
8:1
12"

ITEM 204 - EXCAVATION OF SUBGRADE
ITEM 204 - GRANULAR MATERIAL, TYPE B
ITEM 202 - PAVEMENT REMOVED, ASPHALT
ITEM 202 - PAVEMENT REMOVED

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		'72' 44	'72' 104
'39' 30	'39' 47		
'68' 53	'68' 75		
'35' 27	'35' 34		
'140' 97	'140' 179		

CALCULATED JMB
CHECKED TMT

CROSS SECTIONS LIVINGSTON AVENUE STA. 205+50.00 TO STA. 206+00.00

FRA-70/71-12.68/14.86

519
1815

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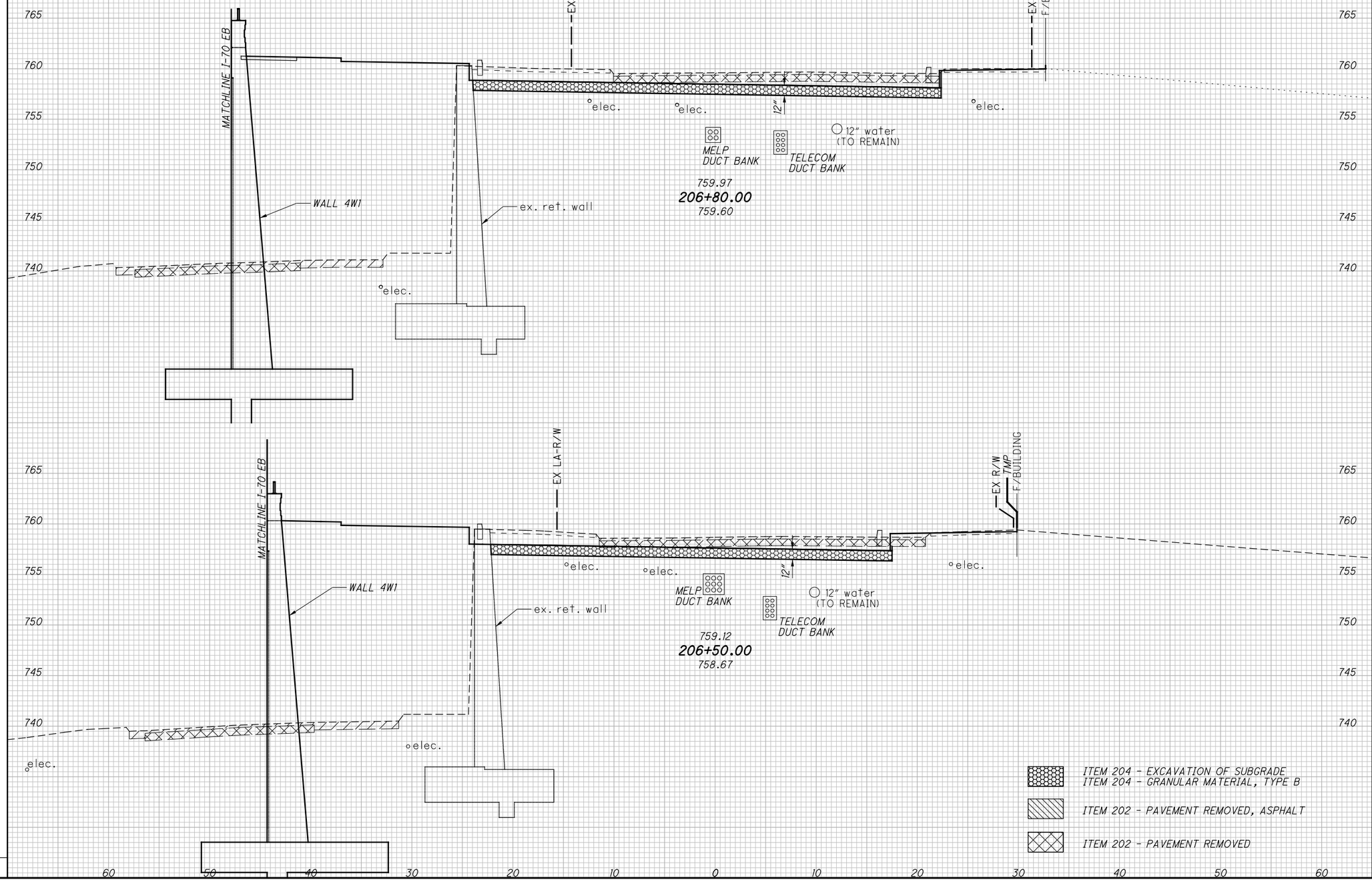
SEEDING END WIDTH	SEEDING SQ. YDS.
	23
9	
	25
6	
48	

60 50 40 30 20 10 0 10 20 30 40 50 60

'#' ITEM 204 - EXCAVATION OF SUBGRADE
ITEM 204 - GRANULAR MATERIAL, TYPE B

NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	TMT	11-29-2021



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		'35' 19	'35' 53 (4)
'46' 23	'46' 71 (4)		
		'48' 22	'48' 76 (4)
'40' 17	'40' 65 (4)		
		'83' 41	'83' 129 (4)

CALCULATED JMB
CHECKED TMT

CROSS SECTIONS LIVINGSTON AVENUE STA. 206+50.00 TO STA. 206+80.00

FRA-70/71-12.68/14.86

520
1815

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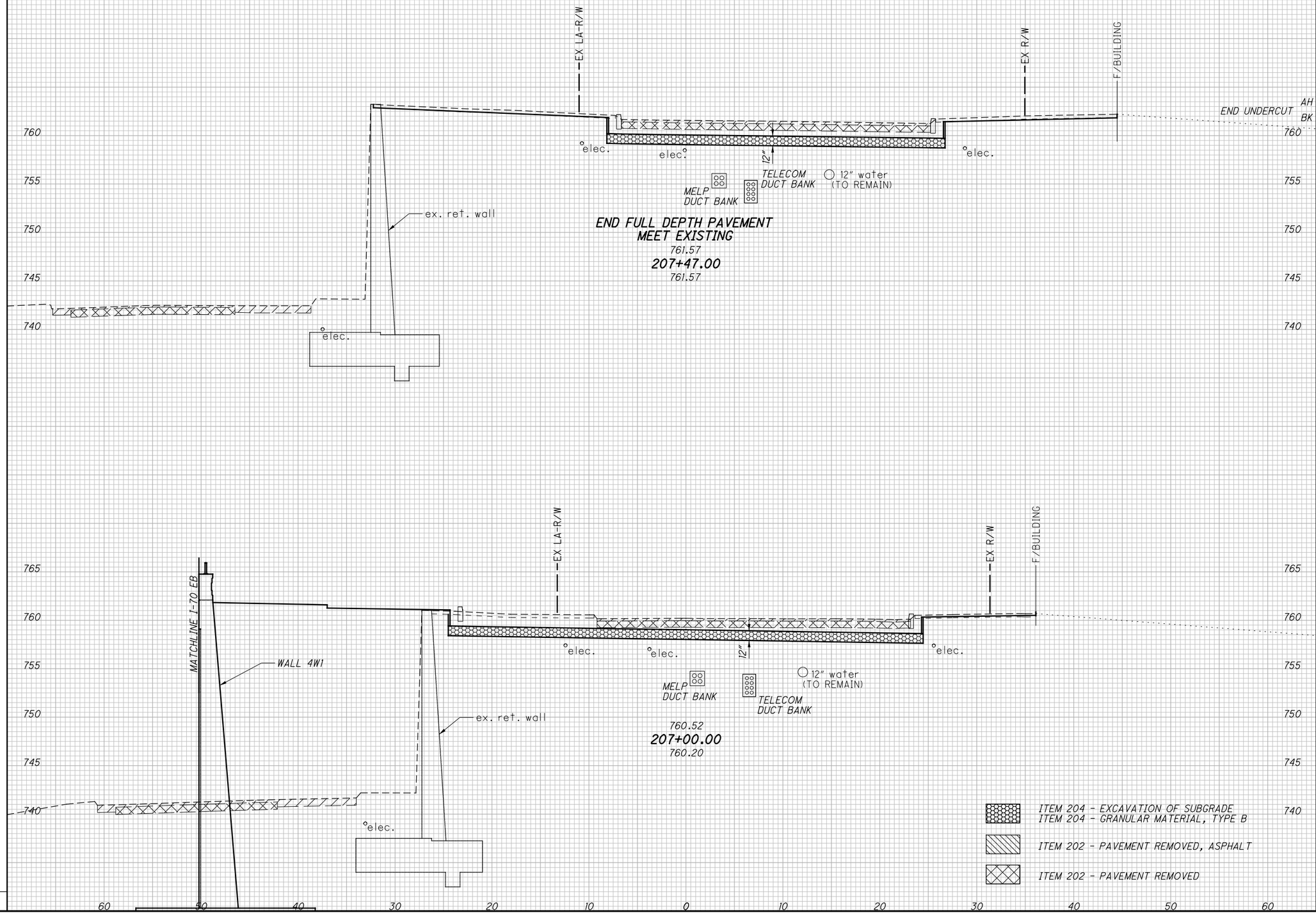
SEEDING END WIDTH	SEEDING SQ. YDS.
	0
0	
	31
12	
	31

NO.	DESCRIPTION	REV. BY	DATE
4	EARTHWORK REVISED	TMT	11-29-2021

'#' ITEM 204 - EXCAVATION OF SUBGRADE
ITEM 204 - GRANULAR MATERIAL, TYPE B



END AREA	CUT	FILL
AH	'0'	'0'
BK	'35'	'35'
	22	2
	'49'	'49'
	28	73
	'73'	'73'
	45	65

VOLUME	CUT	FILL
	1	0
	'73'	'73'
	44	65

CALCULATED JMB
CHECKED TMT

CROSS SECTIONS LIVINGSTON AVENUE STA. 207+00.00 TO STA. 207+47.00

FRA-70/71-12.68/14.86

521
1815

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MATCHLINE STA. 11+50.00 BIKE PATH DETOUR

℄ CONST. PROPOSED BIKE PATH DETOUR

MEET EXISTING FENCE STA. 13+78.34

4

5' LT. +65.50

6' LT. +90.50

24' GATE

N 25° 51' 49" W

10'

CONST. LIMITS

PC Sta. 13+90.50
BEGIN PB W/FENCE

N 2° 05' 49" W

PC Sta. 14+11.24

PT Sta. 14+54.03

PT Sta. 14+71.36

N 64° 07' 19" E

PC Sta. 15+01.74

PT Sta. 15+56.90

N 26° 10' 01" W

PC Sta. 16+66.41

PT Sta. 16+91.06

MATCHLINE STA. 17+00.00 BIKE PATH DETOUR

STRUCTURE NO. FRA-70-1358A

PROPOSED WALL 4W10

PROP. 12" WATER

PI Sta. 135+07.55

PI Sta. 136+34.11

N 23° 52' 15" W

ex. railroad access road (TO REMAIN)

PI Sta. 137+39.69

PI Sta. 137+54.32, 24.24' RT. BIKE PATH DETOUR ℄

N 15° 50' 54" W

CONST. LIMITS

N 26° 10' 01" W

10'

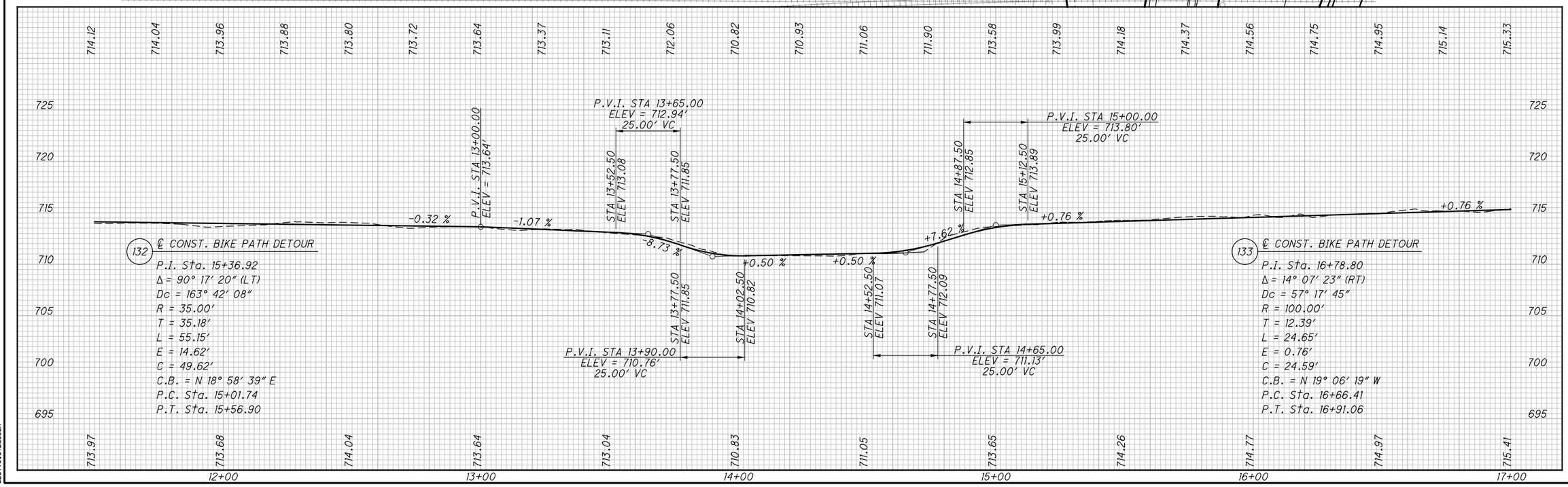
F-10 F-13 F-11 F-12 F-14 F-15 F-6 B-7 B-8 W-19 D-41 P-41 D-100 P-100 P-42A P-42 DV-14

130 131 132 133 134 135 136 137

℄ CONST. BIKE PATH DETOUR
P.I. Sta. 14+01.02
Δ = 23° 46' 00" (RT)
Dc = 114° 35' 30"
R = 50.00'
T = 10.52'
L = 20.74'
E = 1.10'
C = 20.59'
C.B. = N 13° 58' 49" W
P.C. Sta. 13+90.50
P.T. Sta. 14+11.24

℄ CONST. BIKE PATH DETOUR
P.I. Sta. 14+63.81
Δ = 66° 13' 08" (RT)
Dc = 381° 58' 19"
R = 15.00'
T = 9.78'
L = 17.34'
E = 2.91'
C = 16.39'
C.B. = N 31° 00' 45" E
P.C. Sta. 14+54.03
P.T. Sta. 14+71.36

FOR ESTIMATED QUANTITIES, SEE SHEETS 230-255
FOR TRAFFIC CONTROL PLAN, SEE SHEET 1049
FOR DRIVE DETAILS, SEE SHEETS 583-590



℄ CONST. BIKE PATH DETOUR
P.I. Sta. 15+36.92
Δ = 90° 17' 20" (LT)
Dc = 163° 42' 08"
R = 35.00'
T = 35.18'
L = 55.15'
E = 14.62'
C = 49.62'
C.B. = N 18° 58' 39" E
P.C. Sta. 15+01.74
P.T. Sta. 15+56.90

℄ CONST. BIKE PATH DETOUR
P.I. Sta. 16+78.80
Δ = 14° 07' 23" (RT)
Dc = 57° 17' 45"
R = 100.00'
T = 12.39'
L = 24.65'
E = 0.76'
C = 24.59'
C.B. = N 19° 06' 19" W
P.C. Sta. 16+66.41
P.T. Sta. 16+91.06

NO.	DESCRIPTION	REV. BY	DATE
4	WIDENED BPD	CWL	11-29-2021

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CJC
CHECKED CWL

PLAN AND PROFILE BIKE PATH DETOUR STA. 11+50.00 TO STA. 17+00.00

FRA-70/71-12.68/14.86

638
1815

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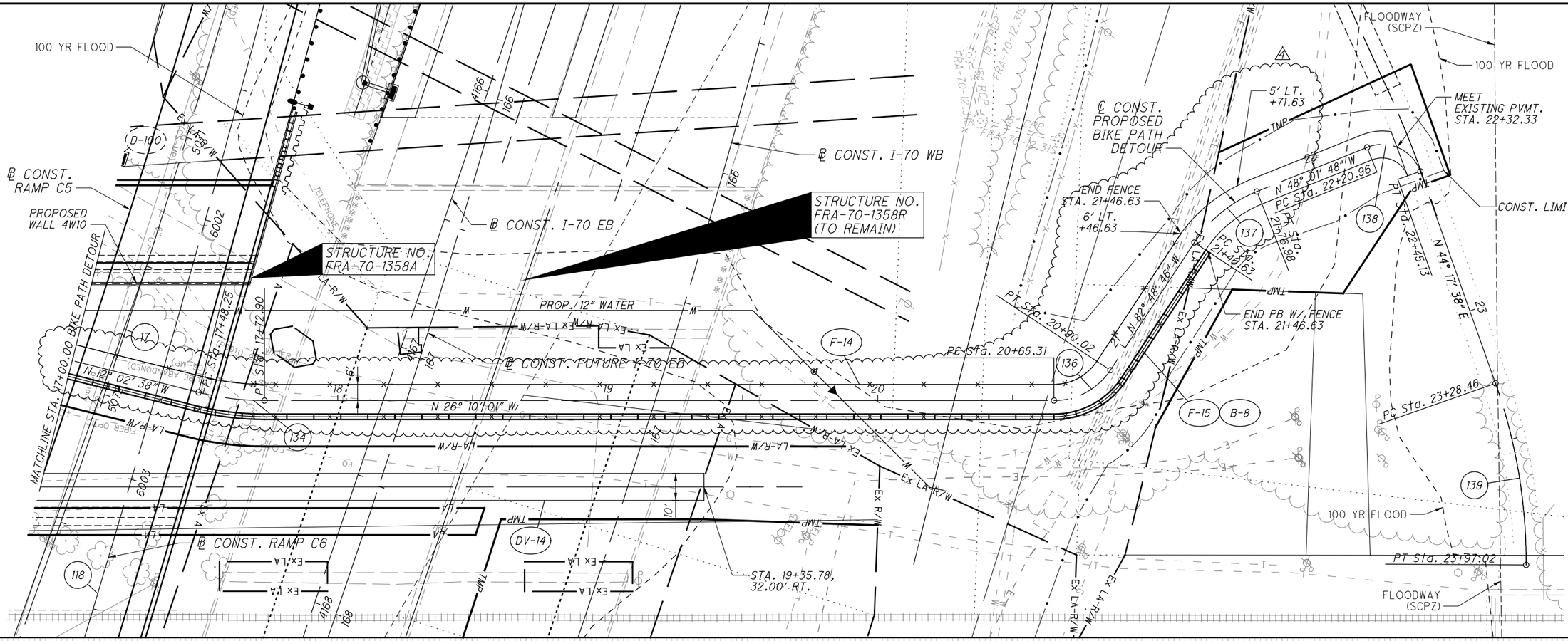

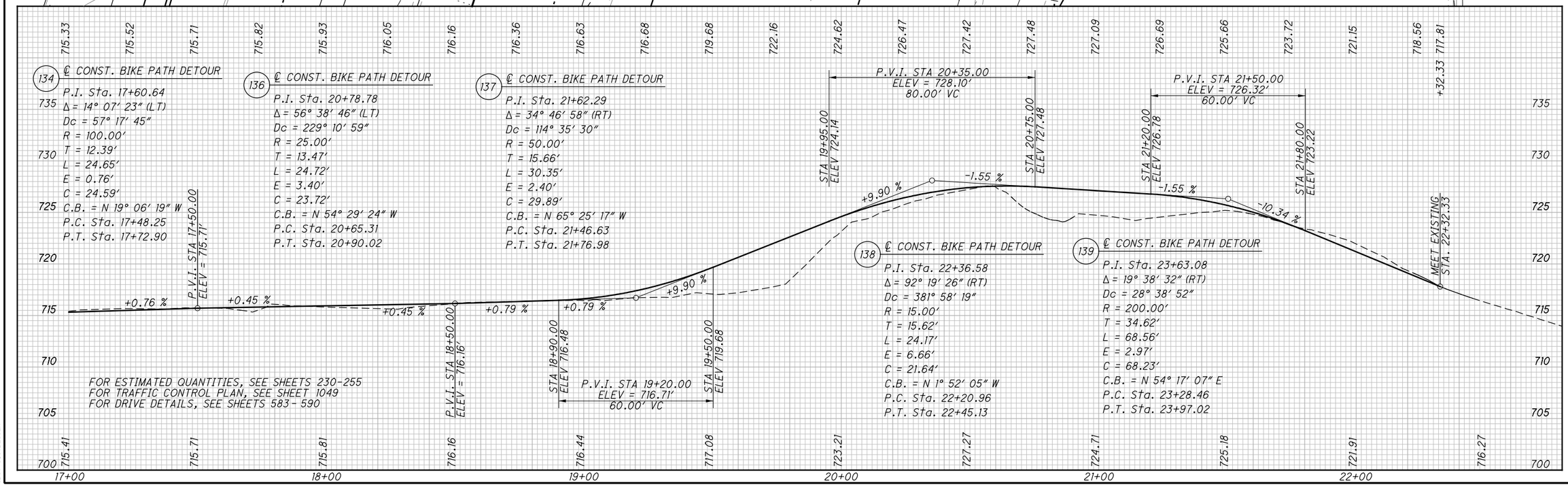

NO.	DESCRIPTION	REV. BY	DATE
4	WIDENED BPD	CWL	11-29-2021

HORIZONTAL SCALE IN FEET (0, 10, 20, 40)

CALCULATED CJC CHECKED CWL

PLAN AND PROFILE BIKE PATH DETOUR STA. 17+00.00 TO STA. 22+57.27

FRA-70/71-12.68/14.86

638A 1815

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NO.	DESCRIPTION	REV. BY	DATE
4	WIDENED BPD	CWL	11-29-2021

SEEDING	
END WIDTH	SQ. YDS.
6	39
	28
4	
	56
16	
123	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
8	0	17	1
		16	0
9	0		
		18	4
10	4		
51	5		

CALCULATED ATR
CHECKED CWL

720
715
710
705
700
720
715
710
705
700
725
720
715
710
705
700

50:1 50:1
711.06
14+50.00
711.05

50:1 50:1
710.82
14+00.00
710.83

6:1 50:1 50:1 3:1
713.11
13+50.00
713.04

60 50 40 30 20 10 0 10 20 30 40 50 60

CROSS SECTIONS BIKE PATH DETOUR
STA. 13+50.00 TO STA. 14+50.00

FRA-70/71-12.68/14.86

6430
1815

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cwilson

NO.	DESCRIPTION	REV. BY	DATE
4	WIDENED BPD	CWL	11-29-2021

SEEDING END WIDTH	SEEDING SQ. YDS.
	39
11	
	56
9	
	47
8	
	142

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		19	2
11	1		
		19	2
9	1		
		18	2
10	1		
		56	6

CALCULATED ATR
CHECKED CWL

720
715
710
705
725
720

50:1 50:1

714.56
16+00.00
714.77

DV-14

50:1 50:1

714.18
15+50.00
714.26

6:1 50:1 50:1 6:1

713.58
15+00.00
713.65

60 50 40 30 20 10 0 10 20 30 40 50 60

CROSS SECTIONS BIKE PATH DETOUR
STA. 15+00.00 TO STA. 16+00.00

FRA-70/71-12.68/14.86

643H
1815

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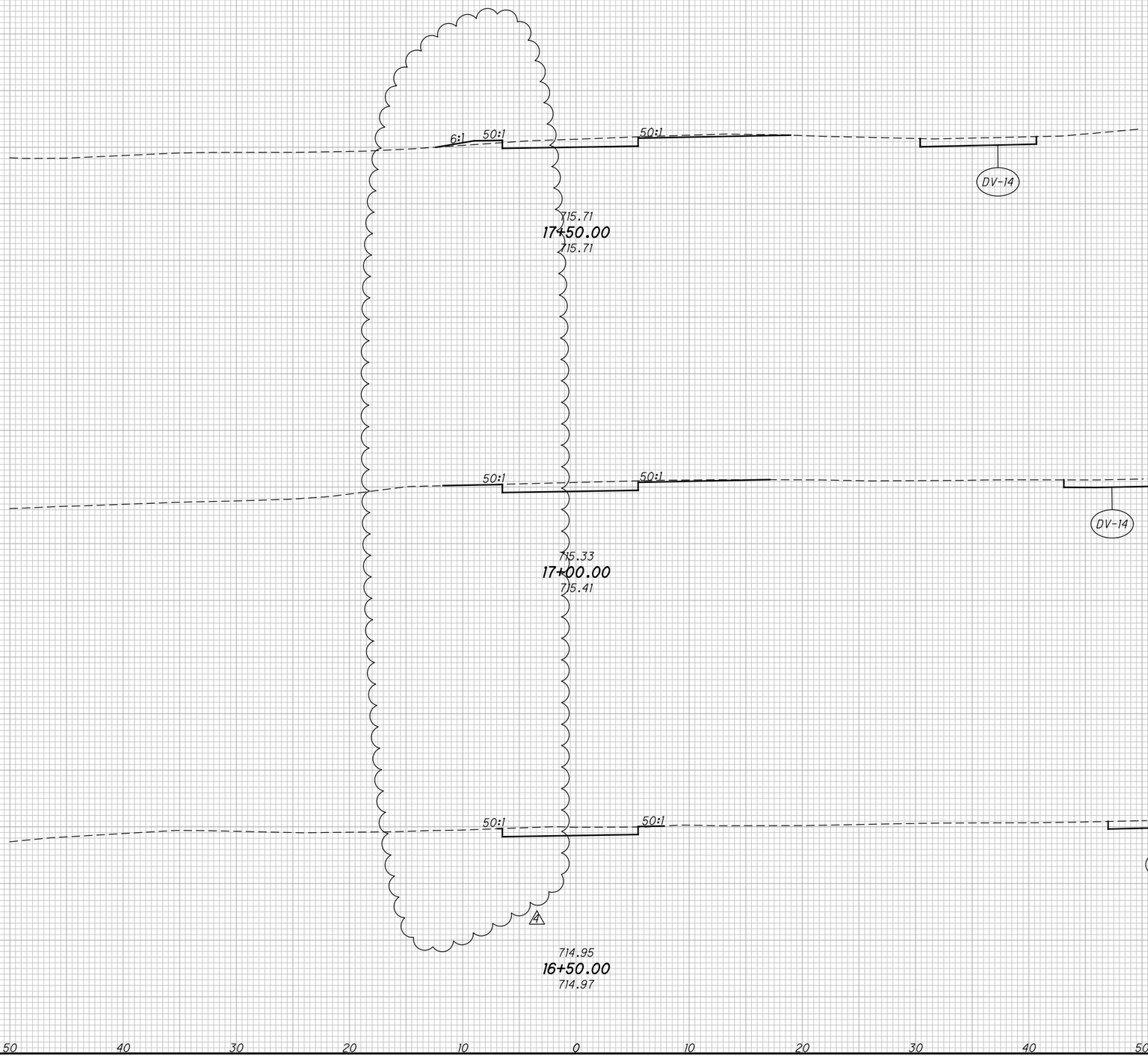
NO.	DESCRIPTION	REV. BY	DATE
4	WIDENED BPD	CWL	11-29-2021

SEEDING	
END WIDTH	SQ. YDS.
20	69
	103
	17
	56
	3
	228



END AREA		VOLUME	
CUT	FILL	CUT	FILL
10	1	16	2
		20	1
		11	0
		19	1
		9	1
		55	4

CALCULATED ATR
CHECKED CWL

CROSS SECTIONS BIKE PATH DETOUR
STA. 16+50.00 TO STA. 17+50.00

FRA-70/71-12.68/14.86

643J
1815

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NO.	DESCRIPTION	REV. BY	DATE
4	WIDENED BPD	CWL	11-29-2021

SEEDING

END WIDTH	SQ. YDS.
11	69
	44
5	113

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		15	1
9	0	15	1
7	1	30	2

CALCULATED ATR
CHECKED CWL

740
735
730
725
720
715
710
705

50:1 50:1 DV-14

716.16
18+50.00
716.16

6:1 50:1 50:1 DV-14

715.94
18+00.00
715.81

60 50 40 30 20 10 0 10 20 30 40 50 60

CROSS SECTIONS BIKE PATH DETOUR
STA. 18+00.00 TO STA. 18+50.00

FRA-70/71-12.68/14.86

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NO.	DESCRIPTION	REV. BY	DATE
4	WIDENED BPD	CWL	11-29-2021

SEEDING END WIDTH	SEEDING SQ. YDS.
30	178
14	122
300	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	79	17	121
7	74		
7	1		
24	195		

CALCULATED ATR
CHECKED CWL

CROSS SECTIONS BIKE PATH DETOUR
STA. 19+00.00 TO STA. 19+50.00

FRA-70/71-12.68/14.86

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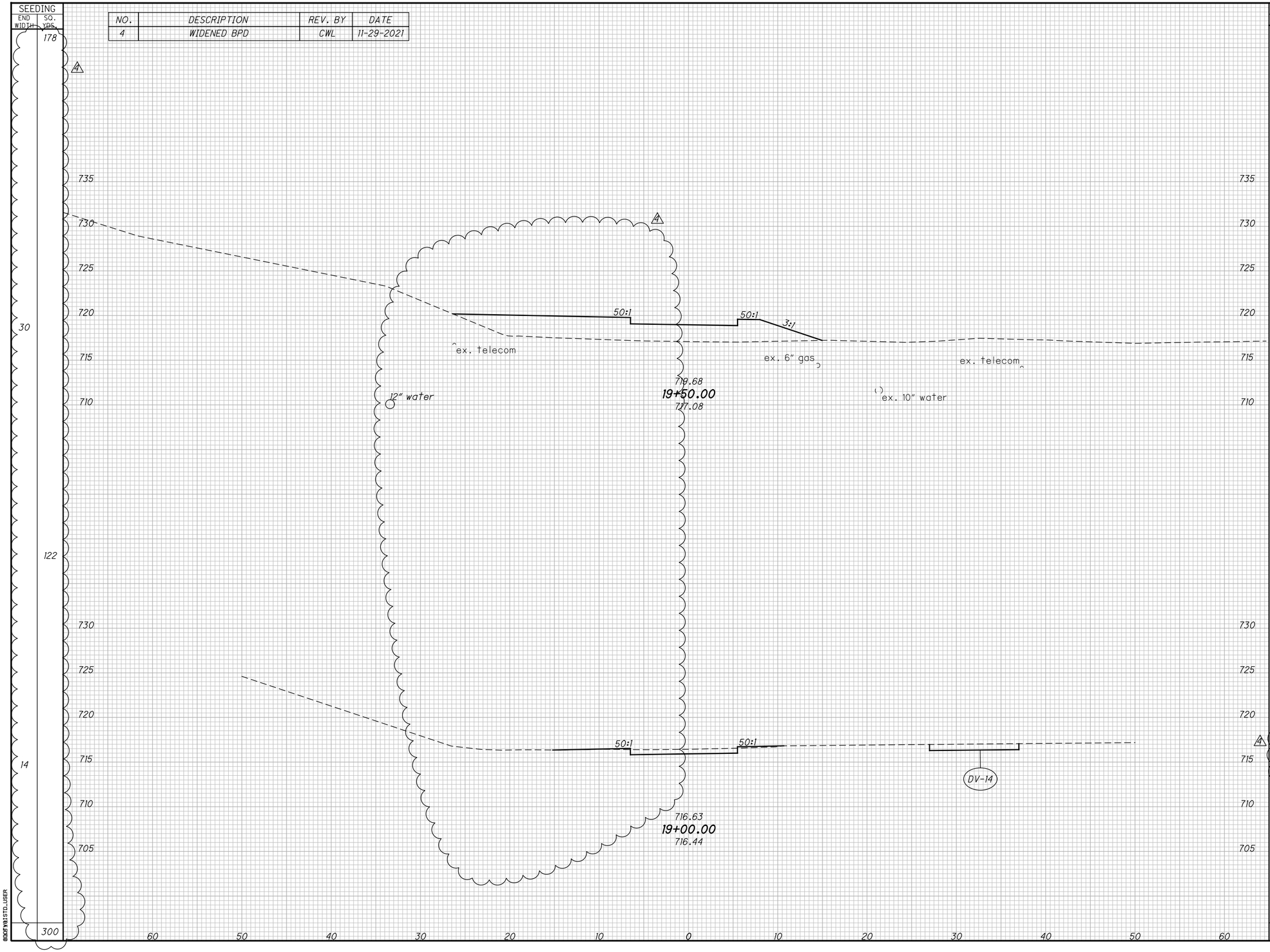

NO.	DESCRIPTION	REV. BY	DATE
4	WIDENED BPD	CWL	11-29-2021

SEEDING END WIDTH	SEEDING SQ. YDS.
47	211
34	225
	436

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
48	37	52	86
18	52	61	82
		113	168

CALCULATED ATR
CHECKED CWL

740 735 730 725 720 715 710

2:1 50:1 50:1 2:1

727.42
20+50.00
727.27

ex. telecom
ex. 6" gas
ex. elec.
ex. telecom
ex. telecom
ex. 36" water

724.62
20+00.00
723.21

ex. telecom
ex. 6" gas
ex. elec.
ex. telecom
ex. telecom
12" water
ex. 10" water

60 50 40 30 20 10 0 10 20 30 40 50 60

CROSS SECTIONS BIKE PATH DETOUR STA. 20+00.00 TO STA. 20+50.00

FRA-70/71-12.68/14.86

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NO.	DESCRIPTION	REV. BY	DATE
4	WIDENED BPD	CWL	11-29-2021

SEEDING	
END WIDTH	SQ. YDS.
18	131
29	131
	262

END AREA		VOLUME	
CUT	FILL	CUT	FILL
5	9	34	8
8	56	12	60
		46	68

CALCULATED ATR
CHECKED CWL

3:1 50:1 50:1 3:1
ex. elec.
ex. elec.
ex. 36" water
725.66
21+50.00
725.18

2:1 50:1 50:1 2:1
ex. elec.
ex. elec.
ex. elec.
ex. 36" water
727.09
21+00.00
724.71

735 730 725 720 715 710

60 50 40 30 20 10 0 10 20 30 40 50 60

CROSS SECTIONS BIKE PATH DETOUR
STA. 21+00.00 TO STA. 21+50.00

FRA-70/71-12.68/14.86

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STRUCTURE NO. FRA-70-1358R

STRUCTURE NO. FRA-70-1358A

100 YR FLOOD

Ex AGO YR FLOOD

℄ CONST. FUTURE I-70 EB

℄ CONST. I-70 EB

℄ CONST. RAMP C5

℄ CONST. RAMP C6

PCC Sta. 6005+89.08

PT Sta. 5076+08.84

42" STEEL CASING

fiber optic (TO REMAIN)

ex. RR signal (TO REMAIN)

ex. RR switch box (TO REMAIN)

ex. propane Tank (TO REMAIN)

D-41
STA 5071+30.61 (C5), 102.26' RT
MH-3, RIM ELEV 711.50
15" (N) 707.25
27" (E) 706.13
27" (W) 706.13
6" UD (NE) 708.50

D-42
STA 5075+00.00 (C5), 35.67' RT
MH-3, RIM ELEV 714.31
12" (NE) 710.62
27" (E) 706.87
27" (W) 706.87
6" UD (N) 707.13

D-38
STA 5077+00.00 (C5), 35.67' RT
MH-3, RIM ELEV 713.95
21" (N) 709.13
27" (W) 707.26
12" (E) 708.84

EX-4
STA 5075+09.63 (C5), 31.24' RT
EX. MH, RIM ELEV 713.88
EX. 12" (N) 710.67 (REMOVE)
EX. 12" (S) 710.67
15" (SW) 710.67

℄ CSX

℄ R.R.

℄ N.S.

31.25'

38.62'

12'

14'

1'-6"

1'-7"

8.46' COVER

1.5 1

2 1

RECEIVING PIT

BORING PIT

ex. tele fiber optic (4.6' deep)

THEORETICAL LIVE LOAD INFLUENCE ZONE

P-42
369'- S.S. 837 - LINER PIPE,
27" I.D., 707.12 @ 0.20%

PROP. 12" WATER

42" STEEL CASING
STA. 5071+45.14, 100.34' RT
INV. 705.52

P-41
322'-27" TYPE C @ 0.20%

42" STEEL CASING
STA. 5072+82.73, 79.36' RT
INV. 705.80

42" STEEL CASING
STA. 5074+38.65, 49.35' RT
INV. 706.11

P-42A
292'-42" CONDUIT, BORED OR JACKED,
AS PER PLAN 42" CONDUIT,
TYPE C, 748.06 (0.625" WALL THICKNESS)
(END SEALS PER ODOT SPEC. 638.11)

P-42B
11'-15" TYPE C, APP @ 0.45%

P-38
199'-27" TYPE C @ 0.20%

730 725 720 715 710 705 700 695

NO.	DESCRIPTION	REV. BY	DATE
4	WIDENED BPD	CWL	11-29-2021

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ATR
CHECKED CWL

STORM SEWER PROFILES
P-42 & P-38

FRA-70/71-12.68/14.86

665
1815

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ESTIMATED QUANTITIES

CALCULATED: TJW DATE: 1-30-2019
CHECKED: RFV DATE: 1-30-2019

ITEM	EXT.	TOTAL	PARTICIPATION 01/NHS/PV	PARTICIPATION 01/NHS/PV	UNITS	DESCRIPTION	A.P.P. REFERENCE SHT. NO.
202	11200	LS	LS	LS		PORTIONS OF STRUCTURE REMOVED	
503	11100	LS	LS	LS		COFFERDAMS AND EXCAVATION BRACING	2
503	21101	562	247	315	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	
504	11101	7,145	3,144	4,001	SF	STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN	2
511	53012	344	151	193	CY	CLASS QC2 CONCRETE, MISC.: FLOODWALL WITH QC/QA 4	2
512	10100	386	170	216	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
SPECIAL	530E00200	LS	LS	LS		SPECIAL STRUCTURES - EMERGENCY CLOSURE	2
SPECIAL	690E98400	LS	LS	LS		SPECIAL - EMERGENCY ACTION PLAN COORDINATION	2
SPECIAL	690E98400	LS	LS	LS		SPECIAL - MONITORING OF EXISTING I-WALL	2
SPECIAL	690E98400	LS	LS	LS		SPECIAL - WCLPP R/W CONSTRUCTION CAMERA	2
SPECIAL	690E98400	LS	LS	LS		SPECIAL - USACE SURVEY AND AS-BUILTS	2

GENERAL NOTES

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

ALL WORK UNDER THIS ITEM SHALL CONFORM TO CMS 503. HOWEVER, THE STABILITY OF THE EXISTING I-WALL STRUCTURE SHALL NOT BE COMPROMISED DURING EXECUTION OF THE WORK. EXCAVATION ALONG THE RIVER SIDE OF THE EXISTING I-WALL SHALL NOT CUT BELOW THE PAVEMENT ELEVATION ON THE ROADWAY SIDE OF THE WALL. THE MAXIMUM CUT SLOPE ORIGINATING AT THE EXISTING I-WALL SHALL NOT EXCEED 3:1 HORIZONTAL TO VERTICAL. ADDITIONALLY, DISTURBANCE TO THE EXISTING EARTHEN LEVEE WHICH ABUTS THE RIVER SIDE SOUTH END OF THE EXISTING I-WALL SHALL BE MINIMIZED AT ALL TIMES. AS SUCH, SUITABLE EXCAVATION BRACING DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH CMS 501.05, PAID SEPARATELY, SHALL BE INSTALLED AT ALL LOCATIONS REQUIRED TO LIMIT EXCAVATION DISTURBANCE NOTED HEREIN.

ITEM 504 - STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN

ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE SHEET PILE, AS SHOWN IN THESE PLANS AND AS SPECIFIED, INCLUDING WATERSTOPS, CLAMP BARS, SEALERS, SLURRY BACKFILL, STORM SEWER PIPE SLEEVES, NEOPRENE SEALS AND HARDWARE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 504 STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN.

ITEM 511 - QC2 CONCRETE, MISC.: FLOODWALL WITH QC/QA 4

ALL WORK UNDER THIS ITEM SHALL CONFORM TO CMS 511, INCLUDING QC/QA. IN ADDITION TO THE REQUIREMENTS OF 511, THIS ITEM SHALL INCLUDE ALL WATERSTOPS EMBEDDED IN THE CONCRETE ABOVE THE STEEL SHEETING, ALL PREFORMED EXPANSION JOINT MATERIALS, JOINT SEALANTS AND OTHER INCIDENTALS NECESSARY TO COMPETE THE WORK.

FINAL DETAILS OF THE REINFORCING STEEL FOR THE I-WALL DEPEND ON THE ACTUAL SHEET PILE SECTION TO BE SUPPLIED BY THE CONTRACTOR SINCE PANEL LENGTHS ARE A FUNCTION OF THE SHEETING DIMENSIONS. THEREFORE, THIS ITEM SHALL ALSO INCLUDE THE FULL COST OF PROVIDING FINAL REBAR SCHEDULES AND FURNISHING AND INSTALLING ALL REINFORCING STEEL AND RELATED INCIDENTALS. REINFORCING SIZE, SHAPES AND SPACING REQUIREMENTS ARE INCLUDED IN THE PLANS.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID PER CUBIC YARD WHICH SHALL CONSTITUTE FULL PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS TO COMPLETE THE WORK.

ITEM SPECIAL - EMERGENCY CLOSURE

IT IS THE INTENT OF THE PROJECT TO CONSTRUCT THE NEW I-WALL WHILE THE EXISTING I-WALL REMAINS IN PLACE. HOWEVER, AT THE NORTHERLY END OF THE PROPOSED WALL WHERE IT TIES INTO THE EXISTING I-WALL, THE EXISTING WALL MUST BE REMOVED TO INSTALL THE NEW WALL. BETWEEN THE TIME WHEN THE EXISTING I-WALL IS REMOVED AND THE NEW I-WALL IS COMPLETED AND TIED INTO THE EXISTING, THE CONTRACTOR SHALL HAVE ADEQUATE MATERIAL, EQUIPMENT AND MANPOWER AVAILABLE TO CONSTRUCT AN EMERGENCY CLOSURE FOR A LENGTH OF APPROXIMATLEY 100 FEET. THE ELEVATION OF THE TOP OF THE EMERGENCY CLOSURE SHALL EQUAL OR EXCEED THE ELEVATION OF THE THE EXISTING AND PROPOSED I-WALLS IMMEDIATELY ADJACENT TO IT. AT THE CONTRACTOR'S OPTION, THE EMERGENCY CLOSURE MAY BE CONSTRUCTED FROM HESCO BARRIERS, DUMPED LOW-PERMEABILITY FILL WITH GEOMEMBRANE OR PLASTIC SHEETING OR OTHER APPROVED METHOD, EXCLUDING SANDBAGS, TO CREATE A TEMPORARY IMPERMEABLE EMERGENCY CLOSURE. TEMPORARY MATERIALS FOR THIS EMERGENCY CLOSURE SHALL BE STORED ON SITE. SIDE SLOPES ON TEMPORARY EMBANKMENT SHALL NOT EXCEED 2:1 HORIZONTALTO VERTICAL.

THE CONTRACTOR SHALL BE CAPABLE OF CONSTRUCTING THE TEMPORARY CLOSURE WITHIN 4 HOURS NOTIFICATION. THIS WORK SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER. UPON COMPLETION OF THE PROPOSED I-WALL, THE TEMPORARY CLOSURE MATERIAL SHALL BE REMOVED AND THE EMBANKMENT AREA FULLY RESTORED TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR THIS WORK SHALL BE MADE AT THE LUMP SUM PRICE BID WHICH SHALL CONSTITUTE FULL PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS TO COMPLETE THE WORK.

ITEM SPECIAL - EMERGENCY ACTION PLAN COORDINATION

THIS ITEM INCLUDES ALL COSTS AND EXPENSES INCURRED BY THE CONTRACTOR TO COORDINATE WITH THE ARMY CORPS OF ENGINEERS, CITY OF COLUMBUS AND ODOT AS IT RELATES TO UPDATING THE EMERGENCY ACTION PLAN DURING CONSTRUCTION FOR THE CONTRACTOR'S ACTUAL MEANS AND METHODS FOR CONSTRUCTING THE NEW FLOODWALL AND MAINTAINING THE INTEGRITY OF THE FLOOD PROTECTION SYSTEM INCLUDING I-WALLS AND ADJACENT LEVEES. THIS ITEM IS ALSO TO INCLUDE ALL CONTRACTOR COSTS FOR ATTENDING WEEKLY PROGRESS MEETINGS AND PREPARING STATUS REPORTS RELATED TO THE WORK. CONTRACTOR SHALL SUBMIT A WORK PLAN TO ODOT, CITY OF COLUMBUS AND THE ARMY CORPS OF ENGINEERS OUTLINING THE PROPOSED SEQUENCE OF CONSTRUCTION WITHIN THE EXISTING FLOODWALL RIGHT-OF-WAY.

CONTRACTOR SHALL NOTIFY ODOT, THE CITY OF COLUMBUS INSPECTOR AND THE USACE A MINIMUM OF TWO DAYS PRIOR TO INITIATING CONSTRUCTION IN EACH OF THE FOUR IDENTIFIED IMPACT AREAS (AREA A, AREA B, AREA C, AND AREA D PER THE REVIEW PLAN DATED 14 NOVEMBER 2019 WITHIN THE 408 PERMIT DOCUMENATION).

PAYMENT FOR THIS WORK SHALL BE MADE AT THE LUMP SUM PRICE BID WHICH SHALL CONSTITUTE FULL PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS TO COMPLETE THE WORK.

ITEM SPECIAL - MONITORING OF EXISTING I-WALL

THIS WORK SHALL INCLUDE MONITORING THE EXISTING I-WALL FOR POTENTIAL MOVEMENT DURING CONSTRUCTION. PLACE A TOTAL OF FIVE (5) SURVEY REFERENCE POINTS ALONG THE EXISTING I-WALL WITHIN THE LIMITS OF WALL WHICH WILL EVENTUALLY BE REMOVED. PLACE REFERENCE POINTS AT EACH END ALONG WITH THREE (3) INTERMEDIATE POINTS EQUALLY SPACED. THE CONTRACTOR SHALL OBSERVE EACH POINT ON A WEEKLY BASIS, OR AS DIRECTED BY THE ENGINEER, AND RECORD MEASUREMENTS AND RELATIVE MOVEMENTS. IF MOVEMENT IN EXCESS OF 0.25 INCH IN ANY DIRECTION IS OBSERVED RELATIVE TO THE PRE-CONSTRUCTION OBSERVATIONS, CEASE WORK ADJACENT TO THE WALL AND NOTIFY THE ENGINEER.

ESTABLISH A SET OF SURVEY CONTROL POINTS. THESE SAME POINTS SHALL BE USED THROUGHOUT THE PROJECT AND SHALL BE INDEPENDENT OF ALL STRUCTURES.

PAYMENT FOR THIS WORK SHALL BE MADE AT THE LUMP SUM PRICE BID WHICH SHALL CONSTITUTE FULL PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS TO COMPLETE THE WORK.

ITEM SPECIAL - WCLPP R/W CONSTRUCTION CAMERA

THIS ITEM INCLUDES ALL COSTS AND EXPENSES INCURRED BY THE CONTRACTOR TO INSTALL CAMERAS THAT COVER ALL CONSTRUCTION OCCURRING WITHIN 50 FEET OF THE WCLPP RIGHT OF WAY (EX FL LINES LABELED IN THE PLANS AS "APPROX. FLOODWALL R/W"). THE CAMERAS SHALL BE LIVE FEEDS AND VIEWABLE REMOTELY BY THE USACE, THE CITY OF COLUMBUS AND ODOT VIA THE INTERNET.

PAYMENT FOR THIS WORK SHALL BE MADE AT THE LUMP SUM PRICE BID WHICH SHALL CONSTITUTE FULL PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS TO COMPLETE THE WORK.

ITEM SPECIAL - USACE SURVEY AND AS-BUILTS

CONTRACTOR SHALL RECOVER THE USACE PRIMARY EXISTING CONTROL STATIONS NEAR THE PROJECT LIMITS AND REPORT THE CONDITION OF ALL MONUMENTS WITH CLOSE-UP AND HORIZONTAL PICTURES. CONTRACTOR SHALL LOCATE THESE STATIONS WITH REAL-TIME KINEMATIC POSITIONING FOR FIVE MINUTE OBSERVATIONS. CONTRACTOR SHALL UPDATE THE NEAREST CONTROL POINTS (215/16, 215/17, 215/18, 215/19, 215/20, 86/12-2, 86/13, 86/14, 86/14-1, OR THE NEXT NEAREST IF ONE MORE MORE OF THESE POINTS IS FOUND TO BE DESTROYED, FOR A MINIMUM OF THREE HORIZONTAL AND TWO VERTICAL CONTROL POINTS) TO NAD83/NAVD88 GEOID 18 OR THE CURRENT SURVEY DATUM AND SUBMIT TO ONLINE POSITIONING USER SERVICE SHAREPOINT (OPUS SHARE) AND PROVIDE THE UPDATED COORDINATES TO THE USACE. THE USACE CONTROL MUST BE UTILIZED FOR ALL AS-BUILT CONSTRUCTION DRAWINGS SUBMITTED TO THE CITY OF COLUMBUS AND THE USACE. EXISTING CONTROL SHOWN ON USACE PLAN INSERT SHEETS 694A - 694B.

CONTRACTOR SHALL PROVIDE TEMPORARY, HIGHLY-VISIBLE VISUAL MARKING OF THE WCLPP CENTERLINE OF PROTECTION AND OTHER FEATURES (E.G. GATEWELLS, CONDUIT OUTFALLS, ETC.) IN CONSTRUCTION AREAS AND IN AREAS IMMEDIATELY ADJACENT TO CONSTRUCTION AREAS WITHIN 50 FEET OF THE WCLPP RIGHT OF WAY. THIS SHALL SERVE TO INCREASE AWARENESS OF THE WCLPP TO THE CONSTRUCTION/FIELD PERSONNEL. THE PROPOSED MARKING METHOD SHALL BE SUBMITTED TO ODOT, THE CITY OF COLUMBUS AND THE USACE FOR CONCURRENCE.

CONTRACTOR SHALL SURVEY THE IMPACTED LEVEE/FLOODWALL FEATURES TO ENSURE THE REQUIRED TOP OF PROTECTION ELEVATION HAS BEEN SATISFACTORILY MET. SURVEYS OF LEVEE EMBANKMENT SECTIONS SHALL ALSO INCLUDE CROSS-SECTIONS AT 50 FOOT INTERVALS. THE SURVEY SHALL OCCUR PRIOR TO SUBMITTAL OF "AS-BUILT" CONSTRUCTION DRAWINGS TO ODOT, THE CITY OF COLUMBUS AND THE USACE. DATA FROM THE SURVEY SHALL BE INCLUDED THEREIN.

CONTRACTOR SHALL PROVIDE THE USACE, THE CITY OF COLUMBUS AND ODOT WITH PLANS AND SPECIFICATIONS WITH AMENDMENTS DURING CONSTRUCTION SHOWING ALTERATIONS AS FINALLY CONSTRUCTED (I.E. AS-BUILTS) WITHIN 180 DAYS OF CONSTRUCTION COMPLETION. THESE RECORD DRAWINGS WILL BE SUBJECT TO REVIEW AND APPROVAL BY THE CITY OF COLUMBUS AND THE USACE TO DETERMINE WHETHER A SUFFICIENT AMOUNT OF INFORMATION HAS BEEN PROVIDED FOR THE CITY OF COLUMBUS' CONTINUED OPERATION AND MAINTENANCE OF THE WCLPP.

PAYMENT FOR THIS WORK SHALL BE MADE AT THE LUMP SUM PRICE BID WHICH SHALL CONSTITUTE FULL PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS TO COMPLETE THE WORK.

EQUIPMENT AND MATERIAL STORAGE WITHIN WLCPP

CONTRACTOR SHALL NOT STORE ANY MATERIALS OR EQUIPMENT WITHIN THE WCLPP RIGHT OF WAY WITHOUT PRIOR WRITTEN CONSENT FROM THE CITY OF COLUMBUS.

⚠

NO.	DESCRIPTION	REV. BY	DATE
1	ADDED USACE NOTES	CWL	11-5-2021
4	FUNDING CODE CHANGE / ADD QC/QA TO ITEM	CWL	11-29-2021

FOR ADDITIONAL FLOODWALL NOTES, SEE SHEET 5/5

DESIGN AGENCY
GPD GROUP.
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
8800 Lyra Drive, Suite 710, Columbus, Ohio 43240 614.210.0731

DESIGNED TJW | DRAWN RPR | CHECKED DJC | REVIEWED DGN | DATE 9-6-19 | STRUCTURE FILE NUMBER N/A | REVISED

FLOODWALL ESTIMATED QUANTITIES & NOTES
RAMP A5 & I-71 NB

FRA-70/71-12.68/14.86
PID No. 105523

2 / 5

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UNLESS NOTED OTHERWISE, THE FOLLOWING NOTES PERTAIN TO RETAINING WALLS 4W1, 4W2, 4W4, 4W5, 4W6, 4W7, 4W8, 4W9, 4W10, 4W11, 4W12, 4W20 AND/OR TEMPORARY RETAINING WALLS T2, T3, T4, T5, T6, T7 AND/OR TEMPORARY SHORING WALLS TS2, TS4, TS5, TS6, WHICH ARE ALL PART OF THIS PROJECT.

FOR SPECIFIC NOTES PERTAINING TO CAST-IN-PLACE REINFORCED CONCRETE WALLS ON SPREAD FOOTINGS, WHICH INCLUDE A PORTION OF 4W1, 4W7, AND 4W9, SEE SHEET 7/14.

FOR SPECIFIC NOTES PERTAINING TO CAST-IN-PLACE REINFORCED CONCRETE WALLS ON DRILLED SHAFTS, WHICH INCLUDE A PORTION OF 4W1, SEE SHEET 8/14.

FOR SPECIFIC NOTES PERTAINING TO TANGENT DRILLED SHAFT WALLS WITH PRECAST PANELS, WHICH INCLUDE A PORTION OF 4W1, 4W2, AND 4W4, SEE SHEETS 8/14 AND 9/14.

FOR SPECIFIC NOTES PERTAINING TO MSE WALLS, WHICH INCLUDE 4W5, 4W6, 4W8, 4W10, 4W11, 4W12, AND 4W20, SEE SHEETS 10/14 THROUGH 12/14.

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

840	DATED	1-18-19	(4W8, 4W10, 4W11, 4W12, 4W20, 4W5, 4W6))
867	DATED	1-18-19	(T2, T3, T4, T5, T6, T7)

DESIGN SPECIFICATIONS

THESE STRUCTIRES CONFORM TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 7TH EDITION, 2014 AND THE ODOT BRIDGE DESIGN MANUAL, 2007 EDITION, INCLUDING REVISIONS THROUGH JULY 2014.

OPERATIONAL IMPORTANCE:

(4W1 4W2 4W4 4W5 4W6)
A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN STRESSES:

CONCRETE CLASS QC1:
COMPRESSIVE STRENGTH - 4.0 KSI (ALL COMPONENTS OF ALL WALLS WITH CLASS QC1 CONCRETE SPECIFIED)

CONCRETE CLASS QC2:
COMPRESSIVE STRENGTH - 4.5 KSI (ALL COMPONENTS OF ALL WALLS WITH CLASS QC2 CONCRETE SPECIFIED)

CONCRETE CLASS QC5:
COMPRESSIVE STRENGTH - 4.5 KSI (4W1, 4W2, 4W4 DRILLED SHAFTS)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50 KSI (4W1, 4W2)

DESIGN LOADING

LIVE LOAD SURCHARGE OF 0.240 KSF.
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF.

HL-93 (4W1, 4W2, 4W4)

EXISTING STRUCTURE PLANS:

PLANS MAY BE EXAMINED BY PROSPECTIVE BIDDERS AT THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 6 OFFICES, 400 E. WILLIAM ST., DELEWARE, OHIO 43015 (PHONE 740-833-8000).

CONSTRUCTION SEQUENCING

WHERE WALL CONSTRUCTION IS PHASED AND A TEMPORARY RETAINING SYSTEM IS REQUIRED, SHOP DRAWINGS OF BOTH PERMANENT AND TEMPORARY WALLS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE COST OF THESE SUBMITTALS SHALL BE INCLUDED FOR PAYMENT WITH THE COST OF THE TEMPORARY WALLS.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

(4W1) THIS ITEM SHALL INCLUDE REMOVAL OF THE TOP PORTION OF THE EXISTING RETAINING WALL AND FOOTING TOE AS INDICATED IN THE PLANS FROM THE EAST END OF THE NEW PROPOSED WALL TO NEAR THE ANGLE POINT OF THE NEW WALL. IT SHALL ALSO INCLUDE REMOVAL OF THE EXISTING WALL FROM THE TOP OF THE EXISTING WALL TO THE BOTTOM OF THE EXISTING FOOTING FROM THE ANGLE POINT TO THE WEST END OF THE PROPOSED NEW WALL.

(4W2) THIS ITEM SHALL INCLUDE REMOVAL OF THE TOP PORTION OF THE EXISTING RETAINING WALL AND FOOTING TOE AS INDICATED IN THE PLANS FROM THE EAST END OF THE NEW PROPOSED WALL TO NEAR THE ANGLE POINT OF THE NEW WALL. IT SHALL ALSO INCLUDE REMOVAL OF THE EXISTING WALL FROM THE TOP OF THE EXISTING WALL TO THE BOTTOM OF THE EXISTING FOOTING FROM THE ANGLE POINT TO THE WEST END OF THE PROPOSED NEW WALL.

EXCAVATION, SHEETING AND BRACING

EXCAVATION ENVELOPES AS DETAILED IN THE PLANS SHALL BE PROTECTED FROM CAVING AND SLOUGHING. WHERE CLEARANCES AND CONSTRUCTION SEQUENCING WILL NOT ALLOW FOR SLOPED EXCAVATIONS, APPROPRIATE SHEETING OR BRACING METHODS SHALL BE EMPLOYED BY THE CONTRACTOR. THIS TEMPORARY SHEETING OR BRACING IS CONSIDERED INCIDENTAL TO ITEM 503 - COFFERDAMS AND EXCAVATION BRACING.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALLS 4W5, 4W6 AND 4W7)

THE DETAILS SHOWN ON THE PLAN FOR TEMPORARY SUPPORT OF EXCAVATION ARE NOT PART OF THE CONTRACT AND ARE ONLY INCLUDED FOR INFORMATION PURPOSES. STEEL SHEETING AND VIBRATORY DRIVING METHODS ARE NOT PERMITTED TO AVOID DAMAGING THE ADJACENT 60" SANITARY SEWER. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DESIGNING THE SHORING SYSTEM, INCLUDING THE SECTION OVER THE EXISTING 60" SANITARY SEWER, PREPARING WORKING DRAWINGS, AND PERFORMING CALCULATIONS ACCORDING TO CMS 501.05. THE DEPARTMENT WILL PAY FOR TEMPORARY SUPPORT OF EXCAVATION AT THE LUMP SUM PRICE FOR ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (TS2, TS4, TS5, TS6)

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN (4W1, 4W2, 4W4, FRA-70-13.95(C))
ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK, AS PER PLAN (4W1, 4W2)

FOR NOTES, SEE SHEET 1746A.

ITEM 511 - CLASS QC2 CONCRETE MISC.: LOAD DISTRIBUTION SLAB: (4W5, 4W6)

THIS ITEM SHALL INCLUDE THE CONCRETE CONSTRUCTION AS DETAILED IN THE PLANS INCLUDING THE WORK NECESSARY TO FURNISH & PLACE THE REINFORCING STEEL. A SINGLE LAYER OF #5 BARS SPACED AT 12" (IN BOTH DIRECTIONS) SHALL BE PLACED 3" FROM THE BOTTOM OF THE SLAB. ALL BARS SHALL BE EPOXY COATED. CONCRETE FOR THE PROPOSED WORK SHALL BE CLASS QC2 AS PER CMS 511.

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE CONCRETE CONSTRUCTION BY THE NUMBER OF CUBIC YARDS.

PAYMENT: ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR ITEM 511 - CLASS QC2 CONCRETE MISC.: LOAD DISTRIBUTION SLAB.

ITEM 511 - CLASS QC2 CONCRETE, MISC.: PARAPET INCLUDING SLEEPER SLAB, WITH QC/QA (4W5, 4W6, 4W8, 4W12, 4W20)

ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND PLACE CONCRETE FOR THE PARAPET ATOP THE SLEEPER SLAB ALONG THE MSE WALL SHALL BE INCLUDED WITH ITEM 511 - CLASS QC2 CONCRETE, MISC.: PARAPET INCLUDING SLEEPER SLAB, WITH QC/QA. THIS ITEM SHALL INCLUDE ALL JOINT MATERIALS, DOWEL BARS AND BOND BREAKERS IN CONTACT WITH THE SLEEPER SLAB. ALL REINFORCING STEEL IN THE SLEEPER SLAB AND PARAPET SHALL BE INCLUDED WITH ITEM 509.

ALL LABOR, MATERIALS, INCIDENTALS, ETC. NECESSARY FOR SEALING THE LONGITUDINAL CONSTRUCTION JOINT BETWEEN THE SLEEPER SLABS AND THE PARAPETS WITH HMWM RESIN PER CMS 511.19 IS ALSO INCLUDED IN THIS ITEM. THE SEALING SHALL OCCUR AND BE FULLY CURED BEFORE THE FINAL PAVEMENT IS PLACED OVER THE SLEEPER SLAB.

ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN (4W8)

PLACE AND COMPACT GRANULAR EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT.

4

ABBREVIATIONS

ABUT.	ABUTMENT	MIN.	MINIMUM
BRG.	BEARING	ADDIT.	ADDITIONAL
BOT.	BOTTOM	FRWD.	FORWARD
BTWN.	BETWEEN	SPL.	SPLICE
CONST. JT., C.J.	CONSTRUCTION JOINT	CLR.	CLEAR
B.S.	BOTH SIDES	P.C.P.P.	PERFORATED CORRUGATED PLASTIC PIPE
N.S.	NEAR SIDE	N.P.C.P.P.	NON-PERFORATED CORRUGATED PLASTIC PIPE
F.S.	FAR SIDE		
SER.	SERIES		
TYP.	TYPICAL		
EQ.	EQUAL		
DIM.	DIMENSION		
SPA.	SPACES		
EA.	EACH		
P.E.J.F.	PREFORMED EXPANSION JOINT FILLER		

NO.	DESCRIPTION	REV. BY	DATE
4	ADDED NOTE	MOJ	11-29-2021

DESIGN AGENCY
GPD GROUP.
Cities, Pyle, Schorer, Burns & DeFazio, Inc.
3801 Video Drive, Suite 150, Columbus, Ohio 43219 614.2301733
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DESIGNED	DRAWN	REVIEWED	DATE
DGN	MOJ	TJW	9-6-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC			

RETAINING WALL GENERAL NOTES

FRA-70/71-12.68/14.86
PID No. 105523

3 / 14

700
1815

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ESTIMATED QUANTITIES

CALCULATED: RHC DATE: 5/27/19
CHECKED: DJC DATE: 5/31/19

ITEM	EXT.	TOTAL	PARTICIPATION 4		UNITS	DESCRIPTION	REFERENCE SHEET NO. --- / 1815
			01/NHS/PV	01/NHS/PV			
202	11201	LS	LS	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	700
503	11100	LS	LS	LS		COFFERDAMS AND EXCAVATION BRACING	
503	21100	710	312	398	CY	UNCLASSIFIED EXCAVATION	
509	10000	116,285	51,165	65,120	LB	EPOXY COATED REINFORCING STEEL	
511	34451	42	18	24	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN	1746A
511	46012	502	221	281	CY	CLASS QC1 CONCRETE WITH QC/QA RETAINING/WINGWALL NOT INCLUDING FOOTING	
511	46513	208	92	116	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING, AS PER PLAN	
511	51513	179	79	100	CY	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK, AS PER PLAN	1746A
511	53010	240	106	134	CY	CLASS QC1 CONCRETE, MISC.: SUPPORT BRACKET AND DRILLED SHAFT CAP	705
511	53010	16	7	9	CY	CLASS QC1 CONCRETE, MISC.: CAST-IN-PLACE CONCRETE WALL	705
512	10050	287	126	161	SY	SEALING CONCRETE SURFACES (NON-EPOXY)	1746A
512	10100	1,069	470	599	SY	SEALING CONCRETE SURFACES (EPOXY-URETHANE)	1746A
512	33000	169	74	95	SY	TYPE 2 WATERPROOFING	
513	10220	201,414	88,622	112,792	LB	STRUCTURAL STEEL MEMBERS, LEVEL 1	
516	13600	286	126	160	SF	1" PREFORMED EXPANSION JOINT FILLER	
518	21200	306	135	171	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
518	39900	460	202	258	FT	4" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
518	40000	417	183	234	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
524	95472	390	172	218	FT	DRILLED SHAFTS, 60" DIAMETER, ABOVE BEDROCK WITH QC/QA, AS PER PLAN	705
524	95492	1,133	499	634	FT	DRILLED SHAFTS, 72" DIAMETER, ABOVE BEDROCK WITH QC/QA, AS PER PLAN	705
607	98000	307	135	172	FT	FENCE MISC.: WALL MOUNTED TYPE A (WITH VANDAL MESH)	1746A
867	00101	LS	LS	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	707
SPECIAL	20302000	1,015	447	568	CY	ENGINEERED FILL: LIGHTWEIGHT CELLULAR CONCRETE FILL, PERVIOUS	702
SPECIAL	53000600	2,066	909	1,157	SF	STRUCTURES: PRECAST FACADE PANELS	706

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

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DESIGN AGENCY
GPD GROUP.
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
1801 Watermark Drive, Suite 130, Columbus, Ohio 43215 614.210.0731
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DESIGNED	DRAWN	REVIEWED	DATE
RFV	RFV	DGN	9-6-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJC			

ESTIMATED QUANTITIES
CAST-IN-PLACE/TANGENT DRILLED SHAFT WALL 4W1
SOUTHSIDE OF I-70 EB FROM FRA-70-1395C TO FRA-70-1405C

FRA-70/71-12.68/14.86
PID No. 105523

1 / 19

712
1815

ESTIMATED QUANTITIES

CALCULATED: RHC DATE: 5/29/19
CHECKED: DGN DATE: 5/31/19

ITEM	EXT.	TOTAL	PARTICIPATION 4		UNITS	DESCRIPTION	REFERENCE SHEET NO. --- / 1815
			01/NHS/PV	01/NHS/PV			
202	11201	LS	LS	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	700
503	11100	LS	LS	LS		COFFERDAMS AND EXCAVATION BRACING	
503	21100	462	203	259	CY	UNCLASSIFIED EXCAVATION	
509	10000	69,661	30,651	39,010	LB	EPOXY COATED REINFORCING STEEL	
511	34451	42	18	24	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN	1746A
511	46512	4 80	35	45	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	
511	51513	287	126	161	CY	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK, AS PER PLAN	1746A
511	53010	17	7	10	CY	CLASS QC1 CONCRETE, MISC.: CAST-IN-PLACE CONCRETE WALL	705
511	53010	663	292	371	CY	CLASS QC1 CONCRETE, MISC.: SUPPORT BRACKET AND DRILLED SHAFT CAP	705
512	10050	323	142	181	SY	SEALING CONCRETE SURFACES (NON-EPOXY)	1746A
512	10100	1,327	584	743	SY	SEALING CONCRETE SURFACES (EPOXY-URETHANE)	1746A
512	33000	155	68	87	SY	TYPE 2 WATERPROOFING	
513	10280	325,363	143,160	182,203	LB	STRUCTURAL STEEL MEMBERS, LEVEL 4	
516	13600	72	32	40	SF	1" PREFORMED EXPANSION JOINT FILLER	
518	21200	152	67	85	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
518	40000	628	276	352	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
518	40010	29	13	16	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
524	95472	79	35	44	FT	DRILLED SHAFTS, 60" DIAMETER, ABOVE BEDROCK WITH QC/QA	705
524	95533	2,955	1,300	1,655	FT	DRILLED SHAFTS, 96" DIAMETER, ABOVE BEDROCK WITH QC/QA, AS PER PLAN	705
607	98000	309	136	173	FT	FENCE, MISC.: WALL MOUNTED TYPE A (WITH VANDAL MESH)	1746A
867	00101	LS	LS	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	707
SPECIAL	20302000	415	183	232	CY	ENGINEERED FILL (LIGHTWEIGHT CELLULAR CONCRETE FILL), PERVIOUS	702
SPECIAL	53000600	9,703	4,269	5,434	SF	STRUCTURES: PRECAST FACADE PANELS	706

4

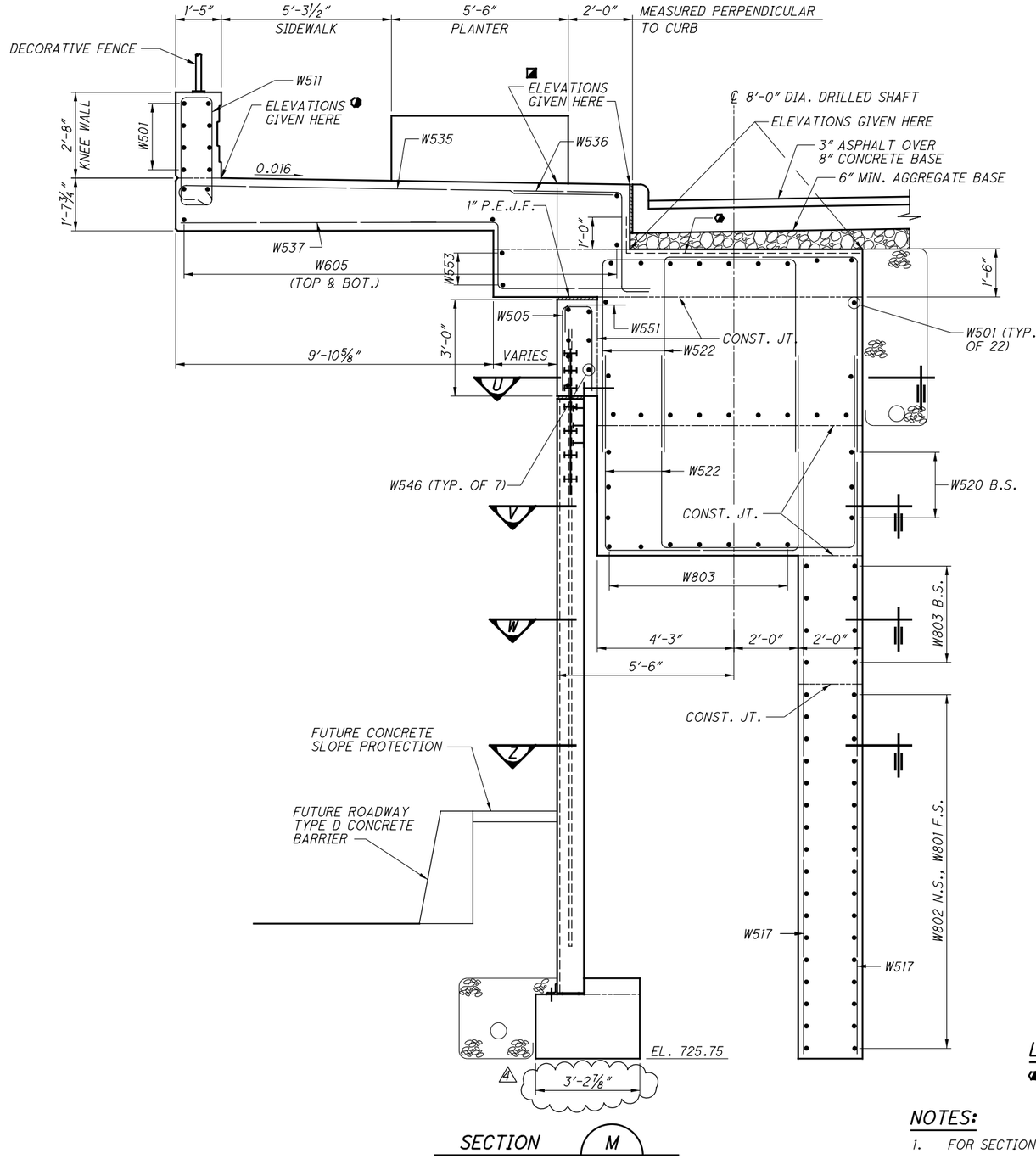
NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE/QUANTITY CHANGE	CWL/RFV	11-29-2021

DESIGN AGENCY
GPD GROUP.
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
1801 Watermark Drive, Suite 130, Columbus, Ohio 43215 614.210.0731

DESIGNED RFV | DRAWN RFV | REVIEWED DGN | DATE 9-6-19
CHECKED DJC | REVISED | STRUCTURE FILE NUMBER

ESTIMATED QUANTITIES
TANGENT DRILLED SHAFT WALL 4W2
NORTHSIDE OF I-70 WB FROM FRA-70-1395C TO FRA-70-1405C

FRA-70/71-12.68/14.86
PID No. 105523



LEGEND:

● TYPE 2 WATERPROOFING

NOTES:

1. FOR SECTION Z AND W, SEE SHT. NO. 11 /24.
2. FOR SECTION U AND V, SEE SHT. NO. 20/24.
3. FOR DECORATIVE FENCE DETAILS, SEE SHT. NO. 1746D/ 1815 .

NO.	DESCRIPTION	REV. BY	DATE
4	DIMENSION REVISION	RFV	11-29-2021

DESIGN AGENCY
GPD GROUP.
Cities, Pyle, Schemm, Burns & Davison, Inc.
1801 Watermark Drive, Suite 130, Columbus, Ohio 43215 614.210.0731

DESIGNED	DRAWN	REVIEWED	DATE
TJW/DGN	RFV	DJC	9-6-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC			

WALL/SIDEWALK SECTION DETAILS
TANGENT DRILLED SHAFT WALL 4W2
NORTHSIDE OF I-70 WB FROM FRA-70-1395C TO FRA-70-1405C

FRA-70/71-12.68/14.86
PID No. 105523

19 / 24

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1815

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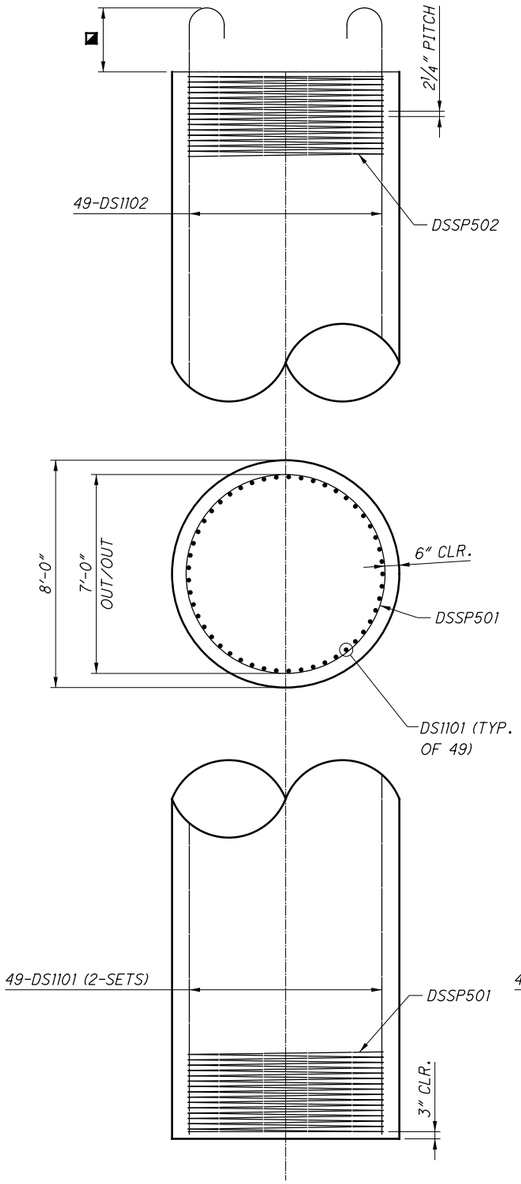
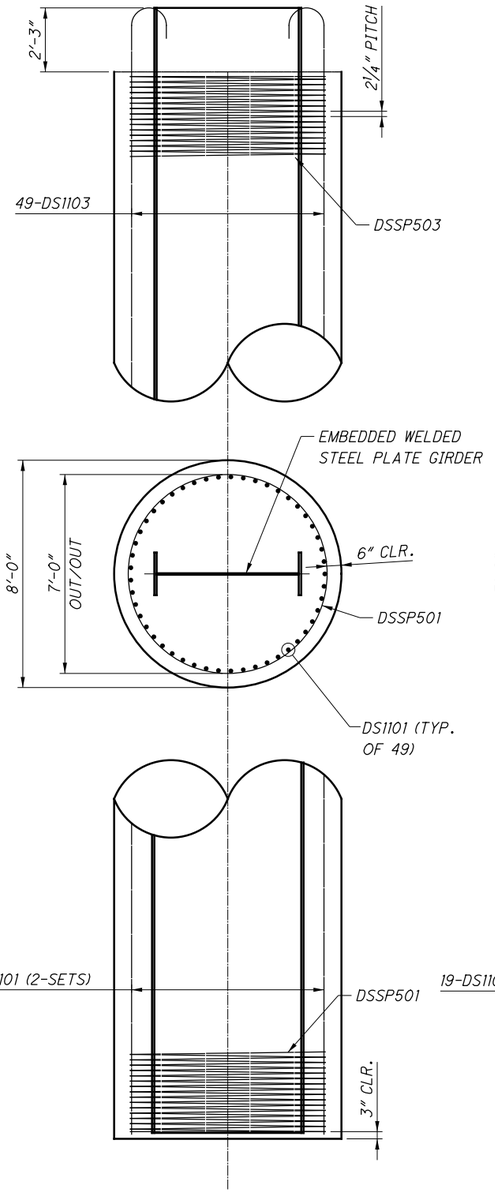
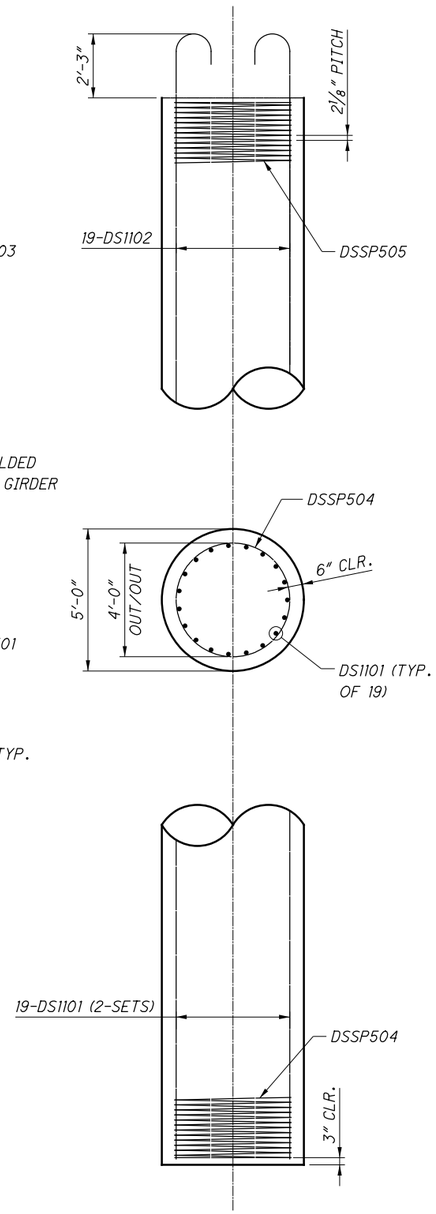


DRILLED SHAFTS 1 TO 21, 23 & 24



DRILLED SHAFTS 25 TO 38



DRILLED SHAFT 22

DRILLED SHAFT REINFORCEMENT DETAILS

MINIMUM LAP SPLICE LENGTHS FOR THE VERTICAL DRILLED SHAFT REINFORCING BARS IS AS FOLLOWS:

#11 BARS = 6'-8"

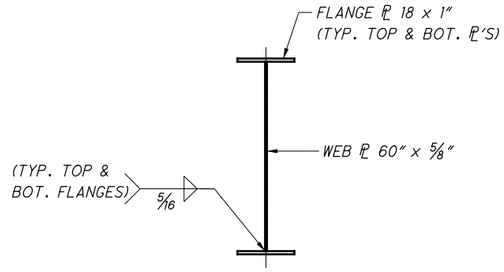


PLATE GIRDER DETAIL

EMBEDDED PLATE GIRDER LENGTH TABLE

D.S. NO.	TOTAL LENGTH
(25)	90'-2"
(26)	91'-5⅛"
(27)	91'-8⅜"
(28)	91'-11⅞"
(29)	92'-3⅝"
(30)	92'-7¼"
(31)	92'-10½"
(32)	93'-1½"
(33)	93'-4⅜"
(34)	93'-7¼"
(35)	93'-10⅛"
(36)	94'-0⅞"
(37)	94'-3¾"
(38)	94'-6⅝"

LEGEND:

■ 10'-3" FOR DRILLED SHAFTS 1, 2, 4, 7, 10, 13, 16, 19 & 2'-3" FOR ALL OTHER DRILLED SHAFTS

NOTE:

1. PAYMENT FOR THE PLATE GIRDER SHALL BE INCLUDED WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 4.
2. THE PLATE GIRDERS SHALL BE COATED WITH A SHOP APPLIED INORGANIC ZINC PRIME COAT CONFORMING TO CMS 514.

NO.	DESCRIPTION	REV. BY	DATE
4	ADDED PLATE GIRDER COATING REQUIREMENT	MOJ	11-23-2021

DESIGN AGENCY
GPD GROUP.
Cities, P/Ts, Schools, Rivers & Elevators, Inc.
520 Washington Avenue, Suite 220, Columbus, Ohio 43215 614.210.0731

DESIGNED	DRAWN	REVIEWED	DATE
DGN	MOJ	DJC	9-6-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC			

DRILLED SHAFT DETAILS
TANGENT DRILLED SHAFT WALL 4W2
NORTHSIDE OF I-70 WB FROM FRA-70-1395C TO FRA-70-1405C

FRA-70/71-12.68/14.86
PID No. 105523

753A
1815

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ESTIMATED QUANTITIES

CALCULATED: RFV DATE: 8-1-19
CHECKED: MOJ DATE: 8-21-19

ITEM	EXT.	TOTAL	PARTICIPARION 4		UNITS	DESCRIPTION	REFERENCE SHEET NO. --- / 1815
			01/NHS/PV	01/NHS/PV			
503	21100	468	206	262	CY	UNCLASSIFIED EXCAVATION	
509	10000	22,652	9,967	12,685	LB	EPOXY COATED REINFORCING STEEL	
511	34451	32	14	18	CY	CLASS QC2 CONCRETE WTH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN	1746A
511	46012	244	107	137	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING	
511	46512	51	22	29	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	
512	10050	154	68	86	SY	SEALING CONCRETE SURFACES (NON-EPOXY)	1746A
512	10100	450	198	252	SY	SEALING CONCRETE SURFACES (EPOXY-URETHANE)	1746A
512	33000	148	65	83	SY	TYPE 2 WATERPROOFING	
516	13600	96	42	54	SF	1" PREFORMED EXPANSION JOINT FILLER	
518	21200	116	51	65	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
518	40000	468	206	262	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
524	95442	1,442	634	808	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK WITH QC/QA, AS PER PLAN	705
524	95472	2,277	1,002	1,275	FT	DRILLED SHAFTS, 60" DIAMETER, ABOVE BEDROCK WITH QC/QA, AS PER PLAN	705
SPECIAL	53000600	4,332	1,906	2,426	SF	STRUCTURES: PRECAST FACADE PANELS	706
607	98000	234	103	131	FT	FENCE, MISC.: WALL MOUNTED TYPE A (W/ VANDAL MESH)	1746A

ABBREVIATIONS

ABUT.	ABUTMENT	MIN.	MINIMUM
BRG.	BEARING	ADDIT.	ADDITIONAL
BOT.	BOTTOM	FRWD.	FORWARD
BTWN.	BETWEEN	SPL.	SPLICE
CONST. JT., C.J.	CONSTRUCTION JOINT	CLR.	CLEAR
B.S.	BOTH SIDES	P.C.P.P.	PERFORATED CORRUGATED PLASTIC PIPE
N.S.	NEAR SIDE	N.P.C.P.P.	NON-PERFORATED CORRUGATED PLASTIC PIPE
F.S.	FAR SIDE	GALV.	GALVANIZED
SER.	SERIES		
TYP.	TYPICAL		
EQ.	EQUAL		
DIM.	DIMENSION		
SPA.	SPACES		
EA.	EACH		
P.E.J.F.	PREFORMED EXPANSION JOINT FILLER		

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

DESIGN AGENCY
GPD GROUP.
Cities, P.Ds, Schools, Burns & Dickerson, Inc.
1801 Watermark Drive, Suite 150, Columbus, Ohio 43215 614.210.0731

DESIGNED RHC | DRAWN RPR | REVIEWED DGN | DATE 9-6-19
CHECKED DJC | REVISED | STRUCTURE FILE NUMBER

ESTIMATED QUANTITIES
TANGENT DRILLED SHAFT WALL 4W4
SOUTH SIDE OF RAMP C5 FROM FRA-70-1390C TO FRA-70-1395C

FRA-70/71-12.68/14.86
PID No. 105523

2 / 9

756
1815

ESTIMATED QUANTITIES

CALCULATED: DJC DATE: 7-16-19
CHECKED: RFV DATE: 7-18-19

ITEM	EXT.	TOTAL	PARTICIPATION 01/NHS/PV	UNITS	DESCRIPTION	REFERENCE SHEET --/1815
203	20000	12723	12723	CY	EMBANKMENT	
203	35000	1160	1160	CY	GRANULAR EMBANKMENT	
503	11101	LS	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	707007167
509	10000	55191	55191	LB	EPOXY COATED REINFORCING STEEL	
511	53012	349	349	CY	CLASS QC2 CONCRETE, MISC.: PARAPET INCLUDING SLEEPER SLAB, WITH QC/QA	700
511	53012	80	80	CY	CLASS QC2 CONCRETE, MISC.: LOAD DISTRIBUTION SLAB, WITH QC/QA	700
512	10100	3163	3163	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	13200	582	582	SF	½" PREFORMED EXPANSION JOINT FILLER	
516	13900	1961	1961	SF	2" PREFORMED EXPANSION JOINT FILLER	
840	20001	27054	27054	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	707
840	21000	10251	10251	CY	WALL EXCAVATION	
◪ 840	22000	3706	3706	SY	FOUNDATION PREPARATION	
840	23000	11660	11660	CY	SELECT GRANULAR BACKFILL	
840	25010	680	680	FT	6" DRAINAGE PIPE, PERFORATED	
840	25020	405	405	FT	6" DRAINAGE PIPE, NON-PERFORATED	
840	26000	915	915	FT	CONCRETE COPING	
840	26050	23695	23695	SF	AESTHETIC SURFACE TREATMENT	707071746A
840	27000	5	5	DAY	ON-SITE ASSISTANCE	
SPECIAL	20302000	2403	2403	CY	ENGINEERED FILL (EPS GEOFOAM FILL)	701
SPECIAL	20302000	23290	23290	CY	ENGINEERED FILL (LIGHTWEIGHT CELLULAR CONCRETE FILL), CLASS II	702
SPECIAL	20302000	2450	2450	CY	ENGINEERED FILL (LIGHTWEIGHT CELLULAR CONCRETE FILL), CLASS III	702
SPECIAL	20365000	5	5	EACH	SETTLEMENT PLATFORM	709

◪ INCLUDES ALL AREAS UNDER THE ITEM 203 - GRANULAR MATERIAL, TYPE C, AS DEPICTED IN THE CROSS-SECTIONS IN THE PLANS

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

NOTE: QUANTITIES ARE FOR BOTH WALLS 4W5 AND 4W6.

DESIGN AGENCY
GPD GROUP.
Cities, Parks, Schools, Burns & Dickerson, Inc.
8800 Waterford Circle, Suite 210, Columbus, Ohio 43215 614.210.0731

DESIGNED	DRAWN	REVIEWED	DATE
DGN	RPR	TJW	9-6-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJC			

ESTIMATED QUANTITIES
MSE WALLS 4W5 & 4W6
FROM FRA-70-1373R/FRA-70-1373A TO FRA-70-1390C

FRA-70/71-12.68/14.86
PID No. 105523

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11/21/2021
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DOOTY81STD_USER

ESTIMATED QUANTITIES

CALCULATED: MOJ DATE: 9-2-19
CHECKED: TJW DATE: 9-5-19

ESTIMATED QUANTITIES							
ITEM	EXT.	TOTAL	PARTICIPATION 4		UNIT	DESCRIPTION	AS PER PLAN SHEET __/1815
			01/NHS/PV	01/NHS/PV			
503	11101	LS	LS	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	700, 791
503	21100	1,140	502	638	CY	UNCLASSIFIED EXCAVATION	
509	10000	138,307	60,855	77,452	LB	EPOXY COATED REINFORCING STEEL	
511	46012	4 1,150	506	644	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING	
511	46513	562	247	315	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING, AS PER PLAN	
512	10100	1,048	461	587	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	13600	292	128	164	SF	1" PREFORMED EXPANSION JOINT FILLER	
516	13900	61	27	34	SF	2" PREFORMED EXPANSION JOINT FILLER	

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE/ QUANTITY REVISION	CWL/RFV	11-29-2021

DESIGN AGENCY
GPD GROUP.
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
8800 Lyra Drive, Suite 720, Columbus, Ohio 43240 614.210.0731

DESIGNED JMH | DRAWN JMH | REVIEWED DGN | DATE 9-6-19
CHECKED TJW | REVISED | STRUCTURE FILE NUMBER

ESTIMATED QUANTITIES
C.I.P. WALL 4W7
I-70 MEDIAN BETWEEN FRA-70-1373R & FRA-70-1390C

FRA-70/71-12.68/14.86
PID No. 105523

1 / 14

790
1815

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11/28/2021
10:08:25 AM
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CALCULATED: DK DATE: 3/12/15

CHECKED: RA DATE: 3/12/15

ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	PARTICIPATION 01/NHS/PV	PARTICIPATION 01/NHS/PV	UNIT	DESCRIPTION	REFERENCE SHEET NO.	
203	35001	644		644	CY	GRANULAR EMBANKMENT, AS PER PLAN	700	4
203	35110	3285		3285	CY	GRANULAR MATERIAL, TYPE B		
203	98100	5582		5582	SY	ROADWAY MISC.: COLUMN SUPPORTED WALLS	703-703B	1
509	10000	79170		79170	LB	EPOXY COATED REINFORCING STEEL		
511	53012	352		352	CY	CLASS QC2 CONCRETE MISC.: PARAPET INCLUDING SLEEPER SLAB WITH QC/QA	700	
512	10100	3680		3680	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
516	13200	58		58	SF	1/2" PREFORMED EXPANSION JOINT FILLER		
516	13600	268		268	SF	1" PREFORMED EXPANSION JOINT FILLER		
516	13900	1753		1753	SF	2" PREFORMED EXPANSION JOINT FILLER		
840	20001	34590		34590	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	707	
840	21000	3368		3368	CY	WALL EXCAVATION		
840	23000	42100		42100	CY	SELECT GRANULAR BACKFILL		
840	25010	1620		1620	FT	6" DRAINAGE PIPE, PERFORATED		
840	25020	77		77	FT	6" DRAINAGE PIPE, NON-PERFORATED	812	
840	26000	875		875	FT	CONCRETE COPING		
840	26050	34590		34590	SF	AESTHETIC SURFACE TREATMENT	707	
840	27000	1		1	DAY	ON-SITE ASSISTANCE		
SPECIAL	20365000	7		7	EACH	SETTLEMENT PLATFORM	709	

NO.	DESCRIPTION	REV. BY	DATE
1	REVISED ITEM	WCB	11/4/21
4	FUNDING CHANGE	WCB	11/23/21
4	REVISED EMBANKMENT INFORMATION, AS PER PLAN	WCB	11/29/21

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUBLIN-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T • WWW.DJDYNOTECINC.COM

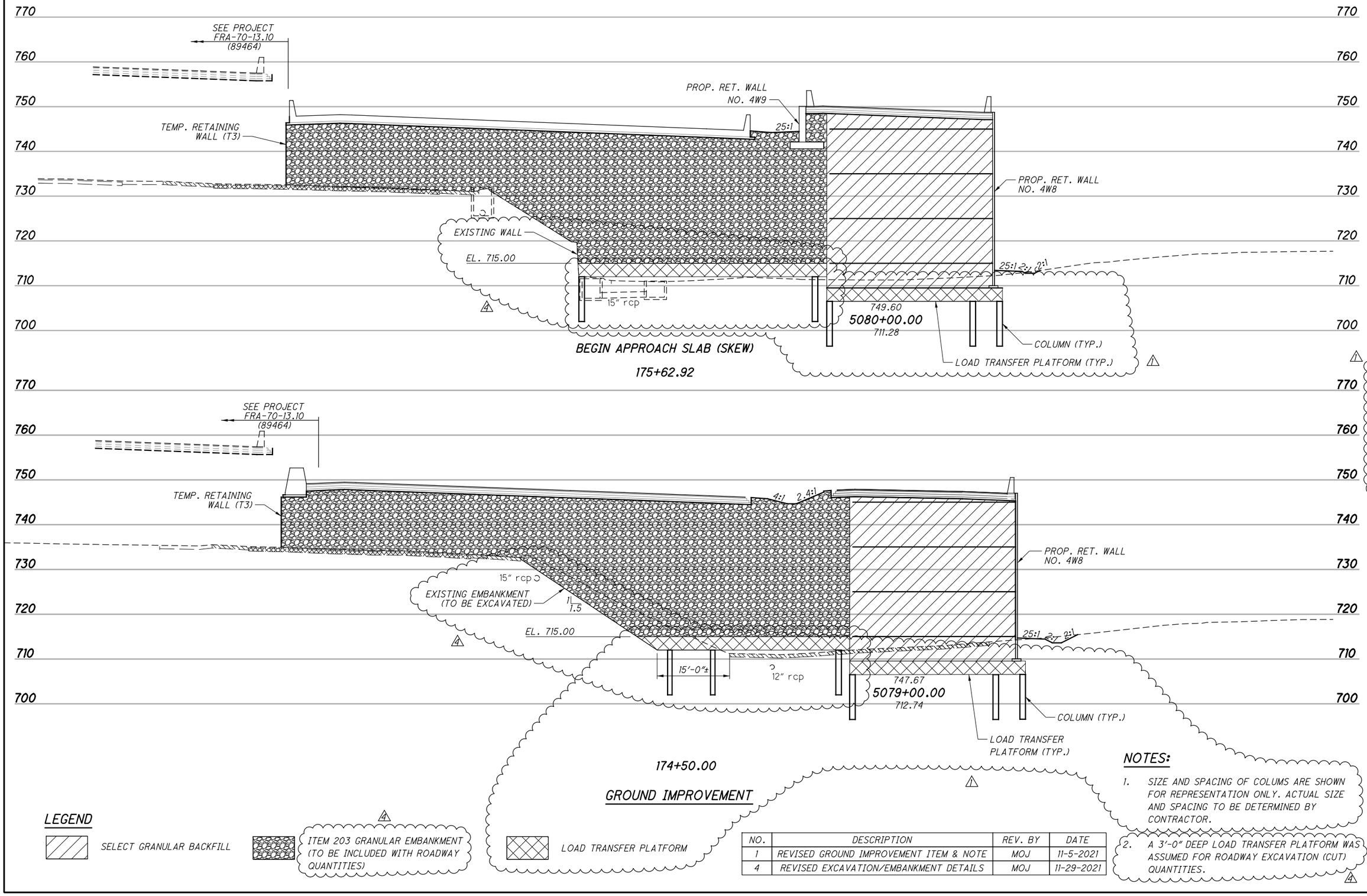
DESIGNED	DRAWN	REVIEWED	DATE
RA	DMK	EC	3/11/2105
CHECKED	REVISED	STRUCTURE FILE NUMBER	
OHK			

ESTIMATED QUANTITIES
MSE WALL 4W8
SOUTH SIDE BETWEEN FRA-70-1358A AND FRA-70-1373A

FRA-70/71-12.68/14.86
PID No. 105523

1 / 15

804
1815



LEGEND

SELECT GRANULAR BACKFILL

ITEM 203 GRANULAR EMBANKMENT (TO BE INCLUDED WITH ROADWAY QUANTITIES)

LOAD TRANSFER PLATFORM

NOTES:

1. SIZE AND SPACING OF COLUMS ARE SHOWN FOR REPRESENTATION ONLY. ACTUAL SIZE AND SPACING TO BE DETERMINED BY CONTRACTOR.
2. A 3'-0" DEEP LOAD TRANSFER PLATFORM WAS ASSUMED FOR ROADWAY EXCAVATION (CUT) QUANTITIES.

NO.	DESCRIPTION	REV. BY	DATE
1	REVISED GROUND IMPROVEMENT ITEM & NOTE	MOJ	11-5-2021
4	REVISED EXCAVATION/EMBANKMENT DETAILS	MOJ	11-29-2021

DESIGN AGENCY
GPD GROUP.
Cleto, Pyle, Scherer, Burns & DeFazio, Inc.
3801 Millennium Centre, Suite 150, Columbus, Ohio 43213 614.210.0753

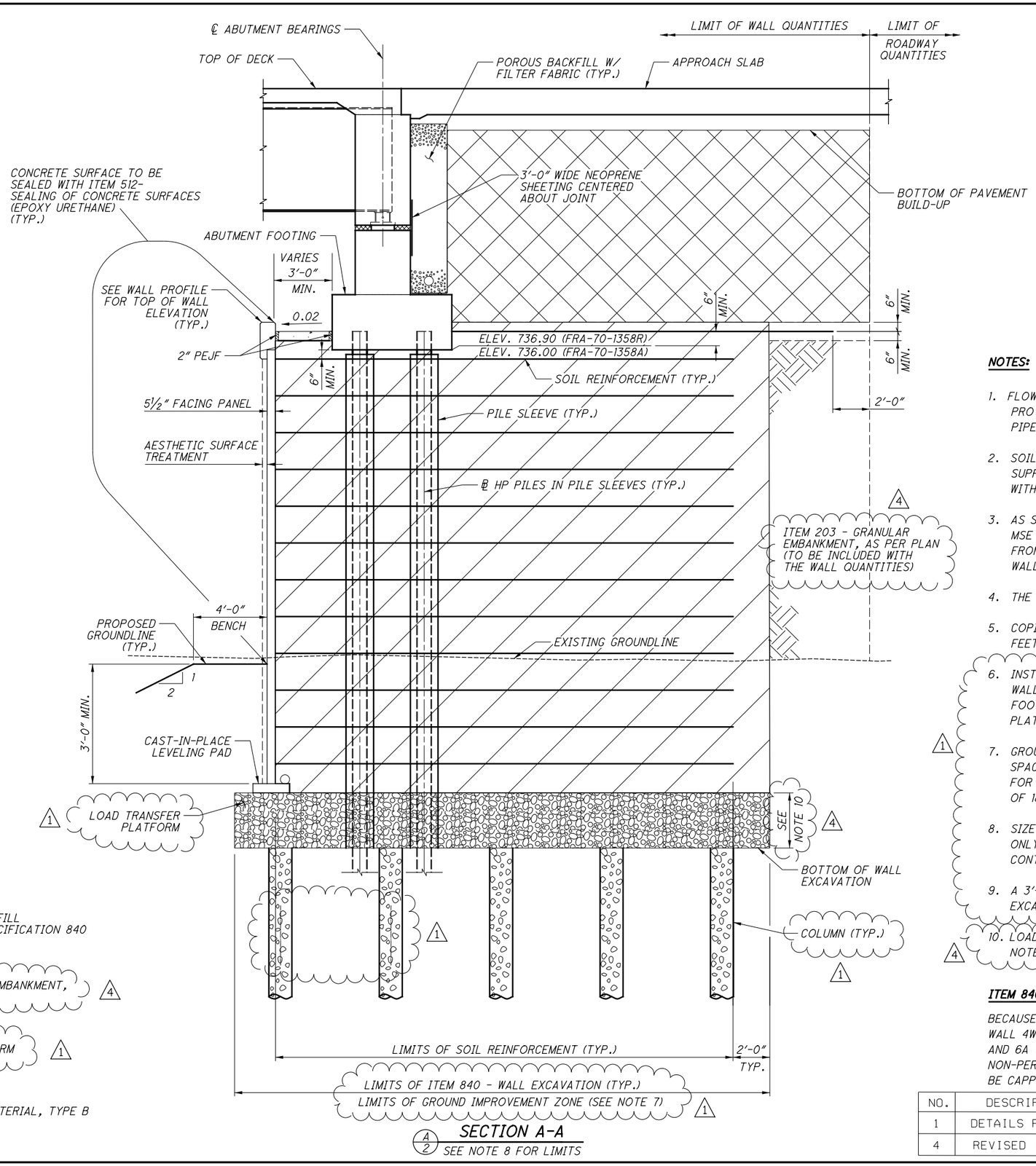
DESIGNED	DRAWN	REVIEWED	DATE
RSN	RSN	RHC	9-6-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DGN			

CROSS-SECTIONS OF GROUND IMPROVEMENT
MSE WALL 4W8
SOUTH SIDE BETWEEN FRA-70-1358A AND FRA-70-1373A

FRA-70/71-12.68/14.86
PID No. 105523

8 / 15

811
1815



A/2 **SECTION A-A**
SEE NOTE 8 FOR LIMITS

LEGEND:

- SELECT GRANULAR BACKFILL PER SUPPLEMENTAL SPECIFICATION 840
- ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN (4)
- LOAD TRANSFER PLATFORM (1)
- ITEM 203 GRANULAR MATERIAL, TYPE B

NOTES:

1. FLOW LINE OF 6" DIA. PERFORATED PLASTIC PIPE WILL VARY TO PROVIDE POSITIVE DRAINAGE AT OUTLET. MINIMUM SLOPE OF PIPE SHALL BE ⅛" PER FOOT.
2. SOIL REINFORCEMENT LENGTH TO BE DETERMINED BY WALL SUPPLIER OF THE APPROVED WALL SYSTEM, AND SHALL COMPLY WITH THE REQUIREMENTS LISTED ON SHEET 708 OF 1815.
3. AS SHOWN IN THE PLANS, THE MAXIMUM DESIGN HEIGHT OF THE MSE WALL VARIES FROM 5'-1" TO 43'-4" (ACTUAL HEIGHT VARIES FROM 5'-1" TO 36'-4"), FINAL HEIGHTS TO BE DETERMINED BY WALL SUPPLIER.
4. THE THICKNESS OF MSE WALL PANELS IS ASSUMED AT 5½".
5. COPING EXPANSION JOINTS SHALL BE SPACED NO MORE THAN 20 FEET APART AND ALIGNED WITH JOINTS BETWEEN FACING PANELS.
6. INSTALL PILE SLEEVES DURING THE CONSTRUCTION OF THE MSE WALL. PILE SLEEVES SHALL EXTEND FROM BOTTOM OF ABUTMENT FOOTING TO BOTTOM OF WALL EXCAVATION/LOAD TRANSFER PLATFORM AND SHALL BE INSTALLED AS PER SS 840.06.J. (1)
7. GROUND IMPROVEMENT SHALL BE IN THE FORM OF INTERMITTENTLY SPACED COLUMNS SUPPORTING A LOAD TRANSFER PLATFORM (LTP). FOR ADDITIONAL INFORMATION, SEE NOTES ON SHEET 703-703B OF 1815.
8. SIZE AND SPACING OF COLUMNS ARE SHOWN FOR REPRESENTATION ONLY. ACTUAL SIZE AND SPACING TO BE DETERMINED BY CONTRACTOR.
9. A 3'-0" DEEP LOAD TRANSFER PLATFORM WAS ASSUMED FOR WALL EXCAVATION QUANTITIES.
10. LOAD TRANSFER PLATFORM; DESIGN IN ACCORDANCE WITH GENERAL NOTE: ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS. (4)

ITEM 840 - 6" DRAINAGE PIPE, NON-PERFORATED

BECAUSE THERE IS NOT A VERY GOOD LOCATION TO CONNECT THE WALL 4W8 DRAINAGE THAT IS TO BE CONSTRUCTED IN PROJECT 4A AND 6A TO EXISTING DRAINAGE INFRASTRUCTURE, 6" DRAINAGE PIPE, NON-PERFORATED SHALL STUB THROUGH THE TEMPORARY WALL AND BE CAPPED FOR FUTURE PROJECT 4A AND 6A DRAINAGE CONNECTION.

NO.	DESCRIPTION	REV. BY	DATE
1	DETAILS REVISED	WCB	11/4/21
4	REVISED ITEM DESCRIPTION	WCB	11/29/21

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUBLIN-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T • WWW.DJTNOTECINC.COM

DESIGNED	DRAWN	REVIEWED	DATE
RA	DMK	EC	3/11/2105

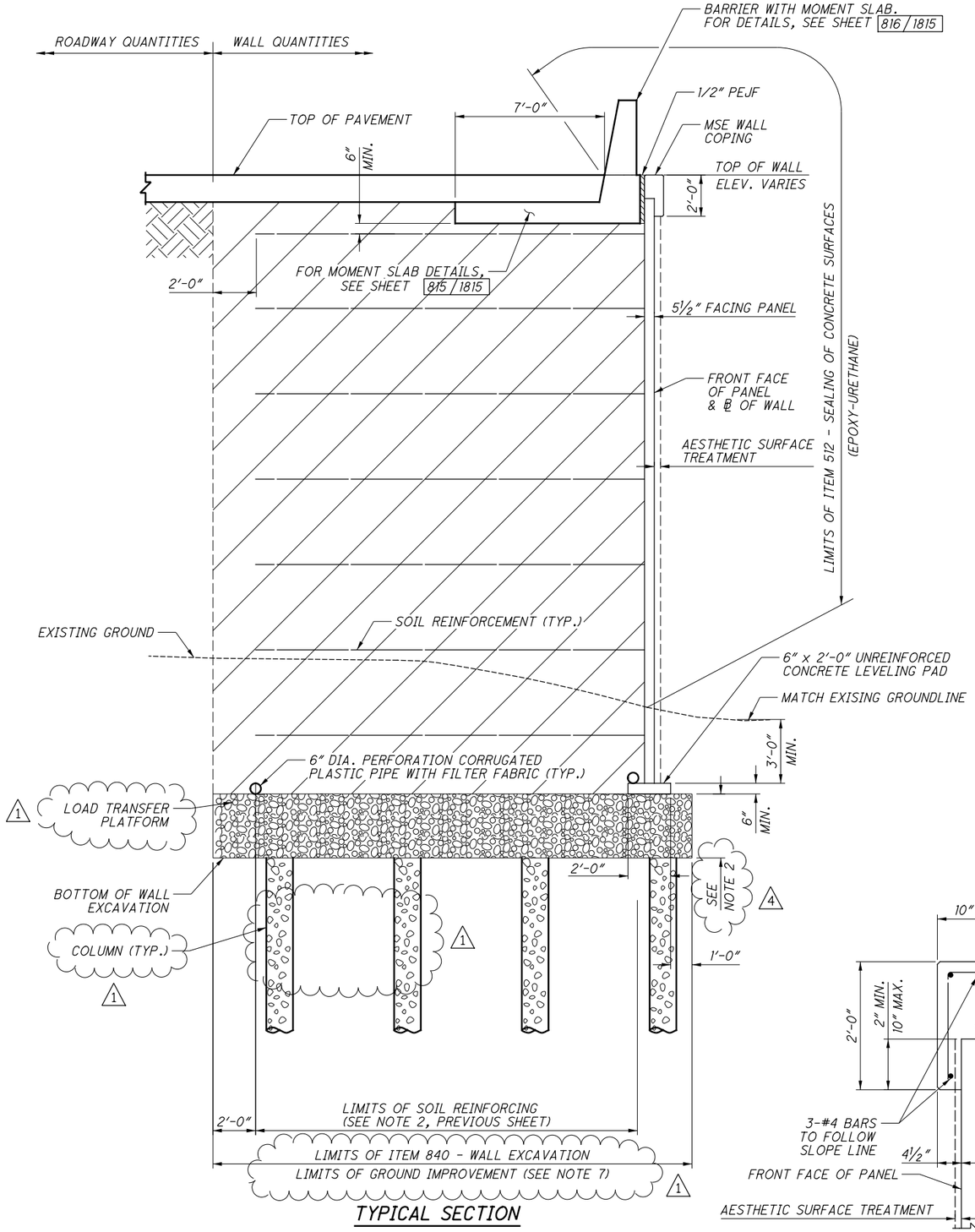
CHECKED: OHK
REVISED
STRUCTURE FILE NUMBER

MISCELLANEOUS DETAILS
MSE WALL 4W8 SECTIONS
SOUTH SIDE BETWEEN FRA-70-1358A AND FRA-70-1373A

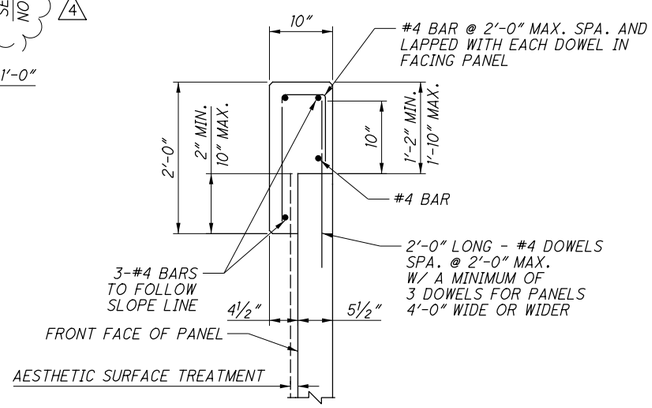
FRA-70/71-12.68/14.86
PID No. 105523

9 / 15

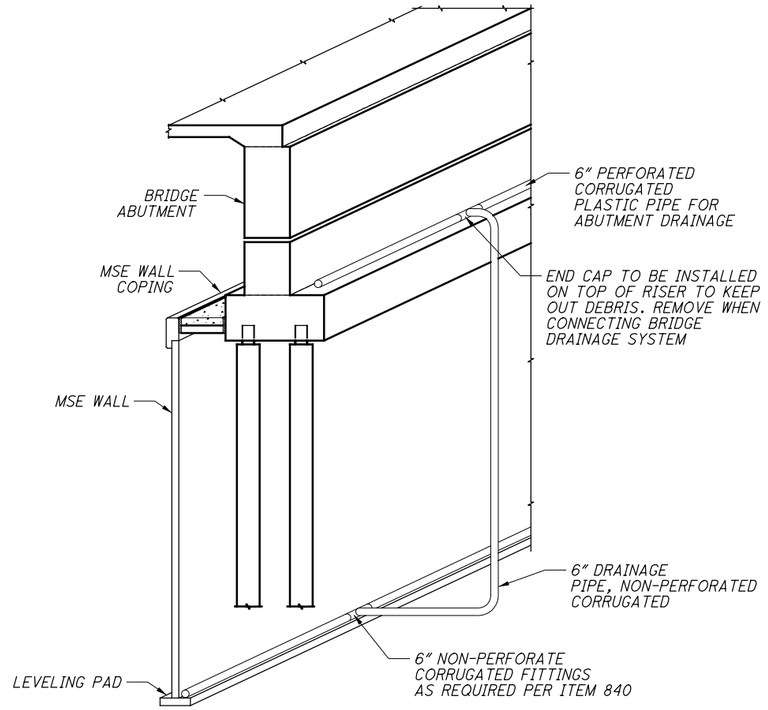
812
1815



TYPICAL SECTION



MSE WALL COPING



TYPICAL DRAINAGE RISER DETAIL

(CONNECTION FROM BRIDGE DRAINAGE SYSTEM TO MSE WALL DRAINAGE)

LEGEND:

SELECT GRANULAR BACKFILL PER SUPPLEMENTAL SPECIFICATION 840

ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN (TO BE INCLUDED WITH ROADWAY QUANTITIES) 4

LOAD TRANSFER PLATFORM 1

NOTES:

1. FOR GROUND IMPROVEMENT AND MSE WALL NOTES, SEE SHEET 812 / 1815

4 2. LOAD TRANSFER PLATFORM; DESIGN IN ACCORDANCE WITH GENERAL NOTE: ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS.

NO.	DESCRIPTION	REV. BY	DATE
1	DETAILS REVISED	WCB	11/4/21
4	REVISED ITEM DESCRIPTION & NOTES	WCB	11/29/21

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUBLIN-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T • WWW.DYNOTECINC.COM

DESIGNED	DRAWN	REVIEWED	DATE
RA	DMK	EC	3/11/2015
CHECKED	REVISED	STRUCTURE FILE NUMBER	
OHK			

MSE WALL SECTION

MSE WALL 4W8

SOUTH SIDE BETWEEN FRA-70-1358A AND FRA-70-1373A

FRA-70/71-12.68/14.86

PID No. 105523

10 / 15

813 / 1815

CALCULATED: DK DATE: 3/12/15

CHECKED: RA DATE: 3/12/15

ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	PARTICIPATION 01/NHS/PV	PARTICIPATION 01/NHS/PV	UNIT	DESCRIPTION	REFERENCE SHEET NO.
509	10000	13885		13885	LB	EPOXY COATED REINFORCING STEEL	
511	46213	114		114	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL INCLUDING FOOTING, AS PER PLAN	704
512	10100	87		87	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	13900	190		190	SF	2" PREFORMED EXPANSION JOINT FILLER	
518	21200	45		45	CF	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
601	20000	80		80	SY	CRUSHED AGGREGATE SLOPE PROTECTION	

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CHANGE	WCB	11/23/21

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUBLIN-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T • WWW.DYNOTECINC.COM

DESIGNED RA | DRAWN DMK | REVIEWED EC | DATE 3/11/2015 | CHECKED OHK | REVISED | STRUCTURE FILE NUMBER

ESITMATED QUANTITIES
CIP WALL 4W9
NORTHWEST CORNER OF FRA-70-1373A

FRA-70/71-12.68/14.86
PID No. 105523

1 / 7

824
1815

CALCULATED: DK DATE: 3/12/15

CHECKED: RA DATE 3/12/15

ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	PARTICIPATION 01/NHS/PV	PARTICIPATION 01/NHS/PV .	UNIT	DESCRIPTION	REFERENCE SHEET NO.
203	20000	871		871	CY	EMBANKMENT	
203	35110	1015		1015	CY	GRANULAR MATERIAL, TYPE B	
.	.	.		.	.	.	
512	10100	295		295	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	13200	11		11	SF	1/2" PREFORMED EXPANSION JOINT FILLER	
516	13900	87		87	SF	2" PREFORMED EXPANSION JOINT FILLER	
840	20000	3150		3150	SF	MECHANICALLY STABILIZED EARTH WALL	707
840	21000	833		833	CY	WALL EXCAVATION	
840	22000	454		454	SY	FOUNDATION PREPARATION	
840	23000	3272		3272	CY	SELECT GRANULAR BACKFILL	
840	23050	107		107	CY	NATURAL SOIL	
840	25010	284		284	FT	6" DRAINAGE PIPE, PERFORATED	
840	25020	125		125	FT	6" DRAINAGE PIPE, NON PERFORATED	834
840	26000	141		141	FT	CONCRETE COPING	
840	26050	3150		3150	SF	AESTHETIC SURFACE TREATMENT	707
840	27000	1		1	DAY	ON-SITE ASSISTANCE	
SPECIAL	20365000	2		2	EACH	SETTLEMENT PLATFORM	709

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CHANGE	WCB	11-23-2021

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUBLIN-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T • WWW.DYNOTECINC.COM

DESIGNED	DRAWN	REVIEWED	DATE
RA	DMK	EC	3/11/2015
CHECKED	REVISED	STRUCTURE FILE NUMBER	
OHK			

ESITMATED QUANTITIES
MSE WALL 4W10
WEST SIDE OF FRA-70-1358R AND FRA-70-1

FRA-70/71-12.68/14.86
PID No. 105523

1 / 4

831
1815

CALCULATED: DK DATE: 3/12/15

CHECKED: RA DATE: 3/12/15

ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	PARTICIPATION 01/NHS/PV	PARTICIPATION 01/NHS/PV	UNIT	DESCRIPTION	REFERENCE SHEET NO.
203	20000	224		224	CY	EMBANKMENT	
203	35110	444		444	CY	GRANULAR MATERIAL, TYPE B	
.	.	.		.	.	.	
512	10100	616		616	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	13200	24		24	SF	1/2" PREFORMED EXPANSION JOINT FILLER	
516	13900	172		172	SF	2" PREFORMED EXPANSION JOINT FILLER	
601	21000	28		28	SY	CONCRETE SLOPE PROTECTION	
840	20000	6480		6480	SF	MECHANICALLY STABILIZED EARTH WALL	707
840	21000	365		365	CY	WALL EXCAVATION	
840	22000	730		730	SY	FOUNDATION PREPARATION	
840	23000	4753		4753	CY	SELECT GRANULAR BACKFILL	
840	23050	562		562	CY	NATURAL SOIL	
840	25010	663		663	FT	6" DRAINAGE PIPE, PERFORATED	
840	25020	63		63	FT	6" DRAINAGE PIPE, NON-PERFORATED	
840	26000	352		352	FT	CONCRETE COPING	
840	26050	6480		6480	SF	AESTHETIC SURFACE TREATMENT	707
SPECIAL	27000	1		1	DAY	ON-SITE ASSISTANCE	
SPECIAL	20365000	1		1	EACH	SETTLEMENT PLATFORM	709

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CHANGE	WCB	11-23-2021

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUBLIN-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T • WWW.DYNOTECINC.COM

DESIGNED	DRAWN	REVIEWED	DATE
RA	DMK	EC	3/11/2015
CHECKED	REVISED	STRUCTURE FILE NUMBER	
OHK			

ESITMATED QUANTITIES
MSE WALL 4W11
I-71 NB JUST NORTH OF GREENLAWN TO RAMP BRIDGE M9

FRA-70/71-12.68/14.86
PID No. 105523

1 / 10

835
1815

CALCULATE: DK DATE: 3/12/15

CHECKED: RA DATE: 3/12/15

ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	PARTICIPATION 01/NHS/PV	PARTICIPATION 01/NHS/PV	UNIT	DESCRIPTION	REFERENCE SHEET NO.
.	.	.	.		.	.	
509	10000	88774	88774		LB	EPOXY COATED REINFORCING STEEL	
511	53012	305	305		CY	CLASS QC2 CONCRETE MISC.: PARAPET INCLUDING SLEEPER SLAB WITH QC/QA	700
512	10100	2751	2751		SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	13200	63	63		SF	1/2" PREFORMED EXPANSION JOINT FILLER	
516	13600	254	254		SF	1" PREFORMED EXPANSION JOINT FILLER	
516	13900	1648	1648		SF	2" PREFORMED EXPANSION JOINT FILLER	
840	20000	23305	23305		SF	MECHANICALLY STABILIZED EARTH WALL	707
840	21000	8224	8224		CY	WALL EXCAVATION	
840	22000	2473	2473		SY	FOUNDATION PREPARATION	
840	23000	17963	17963		CY	SELECT GRANULAR BACKFILL	
840	23050	655	655		CY	NATURAL SOIL	
840	25010	1925	1925		FT	6" DRAINAGE PIPE, PERFORATED	
840	25020	58	58		FT	6" DRAINAGE PIPE. NON-PERFORATED	
840	26000	937	937		FT	CONCRETE COPING	
840	26050	23305	23305		SF	AESTHETIC SURFACE TREATMENT	707
840	27000	1	1		DAY	ON-SITE ASSISTANCE	

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CHANGE	WCB	11-23-2021

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUBLIN-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T • WWW.DYNOTECINC.COM

DESIGNED	DRAWN	REVIEWED	DATE
RA	DMK	EC	3/11/2015
CHECKED	REVISED	STRUCTURE FILE NUMBER	
OHK			

ESITMATED QUANTITIES
MSE WALL 4W12
SOUTHERN SIDE OF RAMP C5 TO RAMP C3

FRA-70/71-12.68/14.86
PID No. 105523

1 / 20

845
1815

ESTIMATED QUANTITIES

CALCULATED: MOJ DATE: 2-25-19
CHECKED: TJW DATE: 3-5-19

ITEM	EXT.	TOTAL 01/NHS/PV	UNIT	DESCRIPTION	AS PER PLAN SHEET __/1815
203	98100	504	SY	ROADWAY, MISC.: COLUMN SUPPORTED WALLS	703-703B
509	10000	20,943	LB	EPOXY COATED REINFORCING STEEL	
511	53012	130	CY	CLASS QC2 CONCRETE, MISC.: PARAPET INCLUDING SLEEPER SLAB WITH QC/QA	700
512	10100	614	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	13900	405	SF	2" PREFORMED EXPANSION JOINT FILLER	
840	20001	4,486	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	707
840	21000	1,251	CY	WALL EXCAVATION	
840	23000	2,043	CY	SELECT GRANULAR BACKFILL	
840	23050	72	CY	NATURAL SOIL	
840	25010	609	FT	6" DRAINAGE PIPE, PERFORATED	
840	25020	39	FT	6" DRAINAGE PIPE, NON-PERFORATED	
840	26000	289	FT	CONCRETE COPING	
840	27000	5	DAY	ON-SITE ASSISTANCE	

NO.	DESCRIPTION	REV. BY	DATE
1	REVISED ITEM	MOJ	11-5-2021
4	FUNDING CODE CHANGE	CWL	11-29-2021

DESIGN AGENCY
GPD GROUP.
Cities, P.Vs, Schools, Rivers, & Beyond, Inc.
8800 Lyra Drive, Suite 720, Columbus, Ohio 43240 614.410.0731

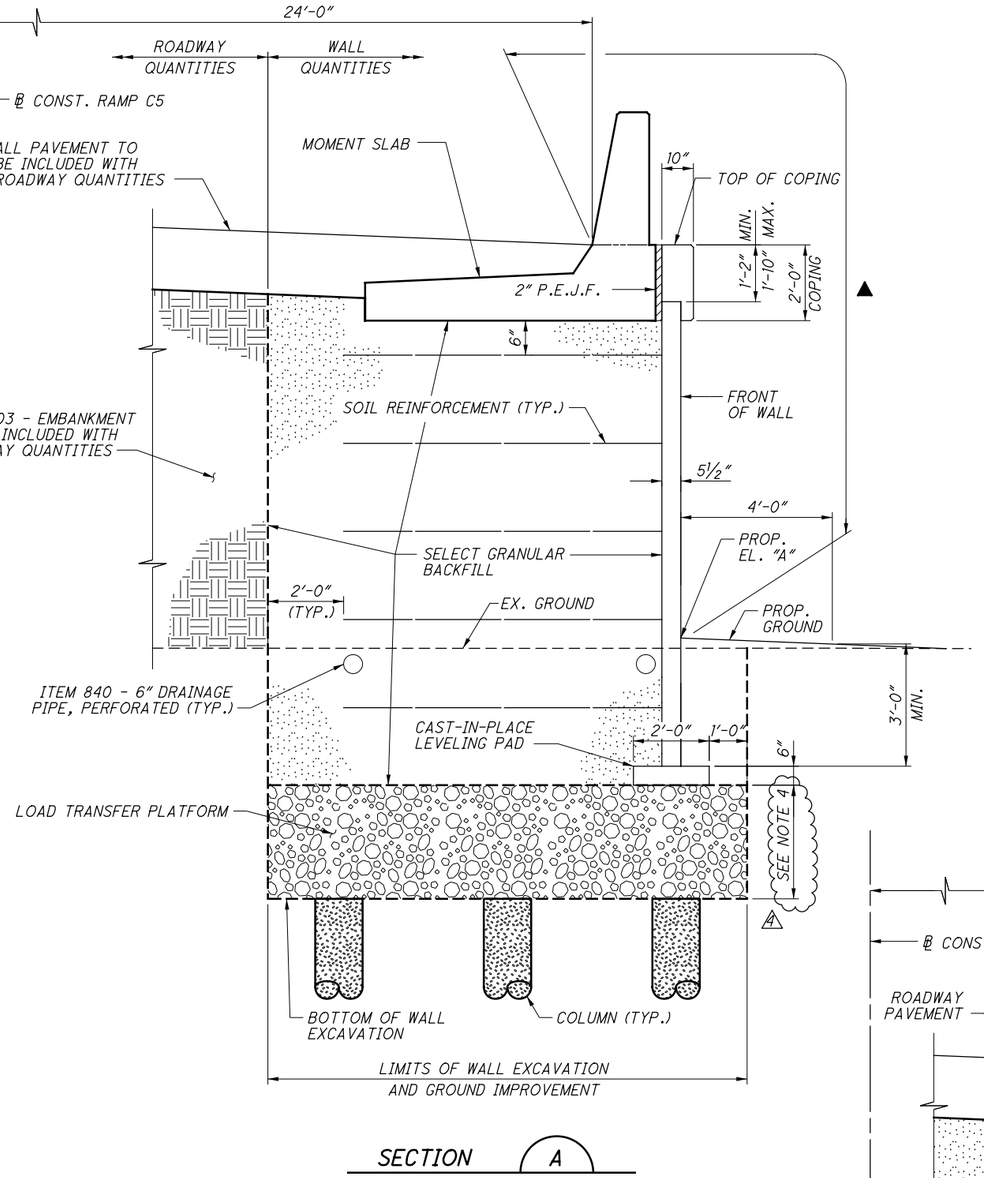
DESIGNED MOJ | DRAWN MOJ | REVIEWED DGN | DATE 6-9-19
CHECKED TJW | REVISED | STRUCTURE FILE NUMBER

ESTIMATED QUANTITIES
MSE WALL 4W20
RAMP C5 ADJACENT TO SUBSTATION

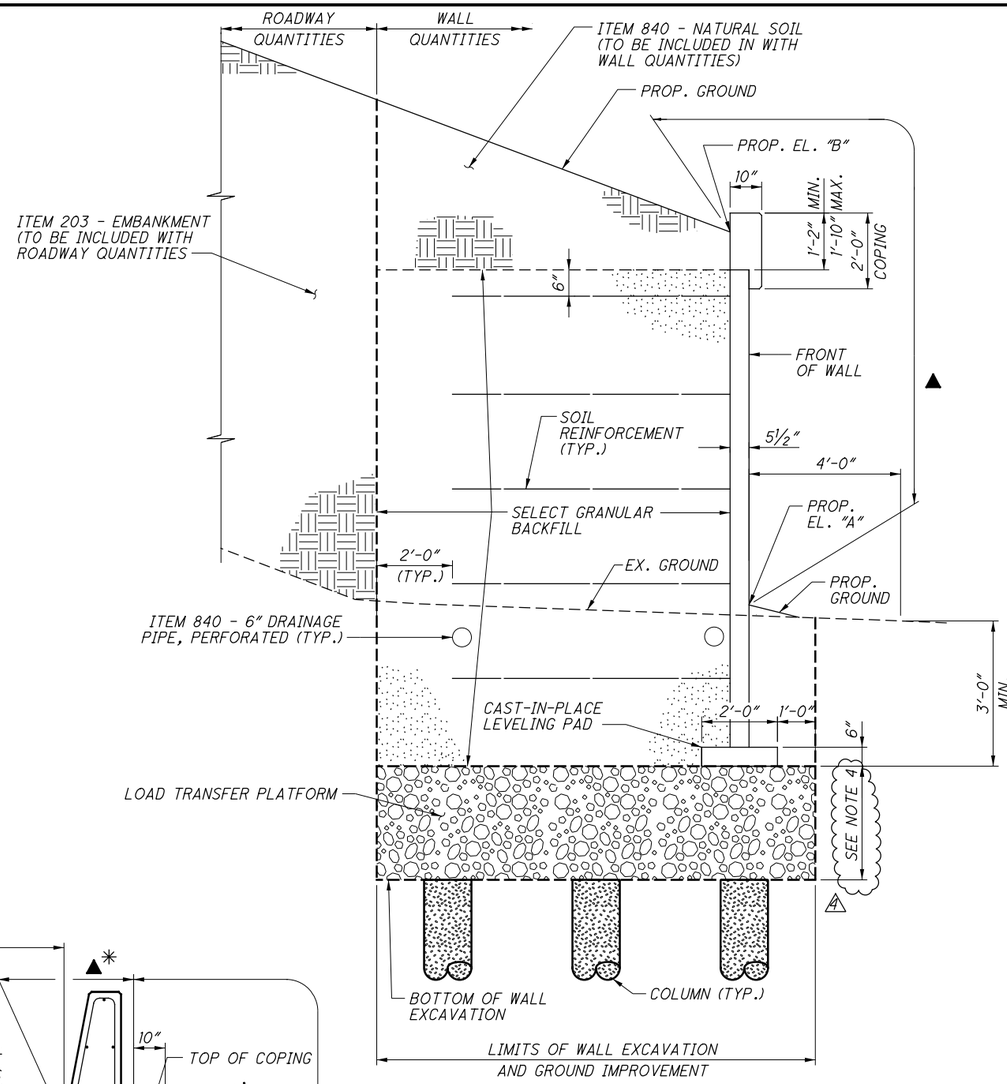
FRA-70/71-12.68/14.86
PID No. 105523

1 / 6

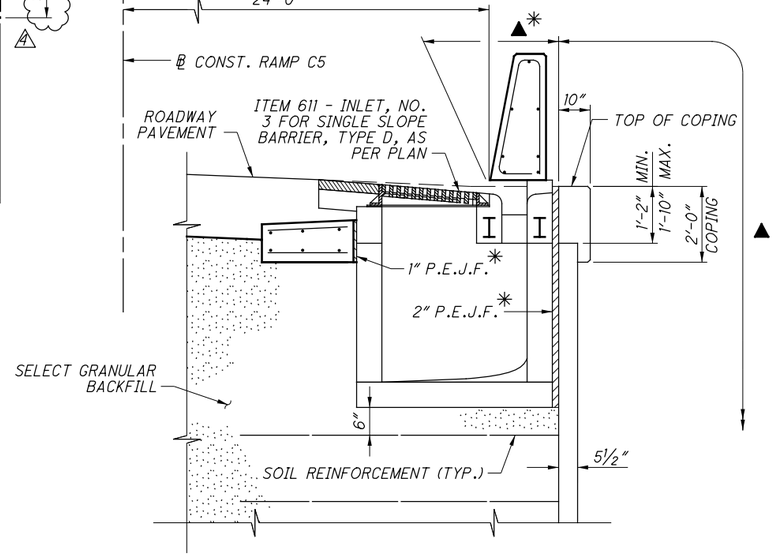
883
1815



SECTION A



SECTION B



SECTION C

LEGEND:

▲ INDICATES LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

✳ TO BE INCLUDED WITH ITEM 611 - INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN IN THE ROADWAY QUANTITIES

NOTES:

1. FOR LOCATIONS OF SECTIONS A, B, AND C, SEE SHEETS 2/6 AND 3/6.
2. GROUND IMPROVEMENT SHALL BE IN THE FORM OF INTERMITTENTLY SPACED COLUMNS SUPPORTING A LOAD TRANSFER PLATFORM (LTP). FOR ADDITIONAL INFORMATION, SEE NOTES ON SHEET 703 - 703B OF 1815.
3. A 3'-0" DEEP LOAD TRANSFER PLATFORM WAS ASSUMED FOR WALL EXCAVATION QUANTITIES.
4. LOAD TRANSFER PLATFORM DESIGN IN ACORDANCE WITH GENERAL NOTE: ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS

NO.	DESCRIPTION	REV. BY	DATE
4	DIMENSION/NOTE REVISION	RFV	11-29-2021

DESIGN AGENCY
GPD GROUP.
Cole, Pyle, Scherer, Burns & Dawson, Inc.
8800 Lyra Drive, Suite 350, Columbus, Ohio 43240 614.210.0731

DESIGNED	DRAWN	REVIEWED	DATE
MOJ	RPR	TJW	6-9-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DGN			

MSE WALL SECTION
MSE WALL 4W20
RAMP C5 ADJACENT TO SUBSTATION

FRA-70/71-12.68/14.86
PID No. 105523

4 / 6

886
1815

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11/24/2021
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ESTIMATED QUANTITIES

CALCULATED: TJW DATE: 9-05-2019
CHECKED: RFV DATE: 9-05-2019

ITEM	EXT.	TOTAL	PARTICIPATION 4		UNITS	DESCRIPTION	A.P.P. REFERENCE SHT. NO.
			01/NHS/PV	01/NHS/PV			
504	11101	10,732	4,722	6,010	SF	STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN	1
518	21200	100	44	56	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
518	40000	385	169	216	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
601	32105	3475	1529	1946	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC, AS PER PLAN	1
SPECIAL	690E98400	LS	LS	LS		SPECIAL - SUBSURFACE UTILITY LOCATING FOR ABANDONED SEWER	1

GENERAL NOTES

ITEM 504 - SHEET PILING LEFT IN PLACE, AS PER PLAN

THIS ITEM INCLUDES ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE PERMANENT SHEET PILE WALL 4W21, INCLUDING SEGMENTS IDENTIFIED AS 'A', 'B' AND 'C' AS SHOWN IN THESE PLANS. IN ADDITION TO THE REQUIREMENTS OF ITEM 504, THIS WORK SHALL INCLUDE CUTTING NECESSARY OPENINGS THROUGH THE SHEETING AS REQUIRED FOR OUTLETTING THE 6" PERFORATED PIPE ASSOCIATED WITH THE POROUS BACKFILL TO BE PLACED BEHIND THE SHEETING WALLS.

SHEET PILE MATERIAL SHALL BE HOT ROLLED STEEL WITH A MINIMUM YIELD STRENGTH OF 50 KSI, MINIMUM ELASTIC SECTION MODULUS OF 48.5 IN3/FT AND A MINIMUM MOMENT OF INTERIA OF 361.2 IN4/FT.

ALL WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 504 SHEET PILING LEFT IN PLACE, AS PER PLAN.

601 - ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC, AS PER PLAN

THIS WORK SHALL CONSIST OF CONSTRUCTING 2'-6" THICK TYPE B ROCK CHANNEL PROTECTION WITH GEOTEXTILE FABRIC. ROCK SHALL BE PLACED LATERALLY FROM THE BOTTOM OF EXISTING SLOPE UP TO THE FACE OF WALLS 4W21A, 4W21B AND 4W21C AND LONGITUDINALLY FOR THE LENGTH AS SHOWN IN THE RETAINING WALL PLANS, AS DIRECTED BY THE ENGINEER. ALL WORK SHALL CONFORM TO ITEM 601. GEOTEXTILE FABRIC SHALL MEET REQUIREMENTS OF ODOT CMS 712.09, TYPE B. 3

PAYMENT FOR THIS WORK SHALL BE MADE AT THE UNIT PRICE PRICE BID PER CUBIC YARD WHICH SHALL CONSTITUTE FULL PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS TO COMPLETE THE WORK AS DESCRIBED AND DIRECTED.

SPECIAL - SUBSURFACE UTILITY LOCATING FOR ABANDONED SEWER

THIS WORK SHALL CONSIST OF USING QUALITY LEVEL 'B' AND LEVEL 'A' SUBSURFACE UTILITY LOCATING TECHNIQUES IN ACCORDANCE WITH ODOT SUBSURFACE UTILITY LOCATING SERVICES SPECIFICATIONS TO PRECISELY LOCATE THE EXISTING ABANDONED 48" COMBINED SEWER IN THE VICINITY OF THE PROPOSED SHEETING WALL SEGMENTS WITHOUT CAUSING UNDUE DISTURBANCE OF THE EXISTING SLOPE. IT IS THE INTENT THAT THIS WORK BE PERFORMED FIRST AT EACH WALL SEGMENT LOCATION PRIOR TO DRIVING SHEETING. THE SEWER SHALL BE AVOIDED AND NOT BE DAMAGED BY THE PILING INSTALLATION OR OTHER RELATED WORK. HOLES EXCAVATED USING LEVEL 'A' METHODS SHALL BE BACKFILLED WITH LOW-STRENGTH MORTAR MATERIAL CONFORMING TO ITEM 613. THE CONTRACTOR SHALL PROVIDE THE HORIZONTAL AND VERTICAL LOCATION OF THE SEWER TO THE ENGINEER AT LEAST 10 DAYS PRIOR TO PERFORMING THE PILING INSTALLATION.

PAYMENT FOR THIS WORK SHALL BE MADE AT THE LUMP SUM PRICE BID WHICH SHALL CONSTITUTE FULL PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS TO COMPLETE THE WORK.

NO.	DESCRIPTION	REV. BY	DATE
3	UPDATED NOTE	CWL	11-19-2021
4	FUNDING CODE CHANGE	CWL	11-29-2021

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DESIGN AGENCY
GPD GROUP.
Gdes, Pyb, Schemm, Burns & Davison, Inc.
6641 Wilcrest Drive, Suite 120, Columbus, Ohio 43235 614.210.0731

DESIGNED	DRAWN	REVIEWED	DATE
TJW	TJW	DGN	9-6-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RFV			

ESTIMATED QUANTITIES & NOTES
SHEETING WALLS 4W21A, 4W21B, 4W21C
ALONG THE EAST SIDE OF RAMP A5

FRA-70/71-12.68/14.86
PID No. 105523

888A
1815

ESTIMATED QUANTITIES							
ITEM	EXT.	TOTAL	PARTICIPATION 01/NHS/PV	PARTICIPATION 01/NHS/PV	UNIT	DESCRIPTION	AS PER PLAN SHEET __/1815
TEMPORARY SHORING WALL TS2							
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	889A
TEMPORARY SHORING WALL TS4							
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	890
4 TEMPORARY SHORING WALL TS4A							
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	890A
TEMPORARY SHORING WALL TS5							
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	891
TEMPORARY SHORING WALL TS6							
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	892
TEMPORARY MSE WALL T2							
867	100	LUMP	LUMP	LUMP		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL	
TEMPORARY MSE WALL T3							
867	100	LUMP	LUMP	LUMP		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL	
TEMPORARY MSE WALL T4							
867	100	LUMP	LUMP	LUMP		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL	
TEMPORARY MSE WALL T5							
867	100	LUMP	LUMP	LUMP		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL	
TEMPORARY MSE WALL T6							
867	101	LUMP	LUMP	LUMP		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	707
TEMPORARY MSE WALL T7							
867	101	LUMP	LUMP	LUMP		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	707

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE / ADDED TS4A	CWL	11-29-2021

DESIGN AGENCY
GPD GROUP.
Cities, P.Vs, Schools, Towns & Districts, Inc.
8800 Lyra Drive, Suite 720, Columbus, Ohio 43240 614.410.0733

DESIGNED	DRAWN	REVIEWED	DATE
MOJ	MOJ	TJW	9-6-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC			

ESTIMATED QUANTITIES
TEMPORARY SHORING AND TEMPORARY WALLS

FRA-70/71-12.68/14.86
PID No. 105523

1 / 1

889
1815

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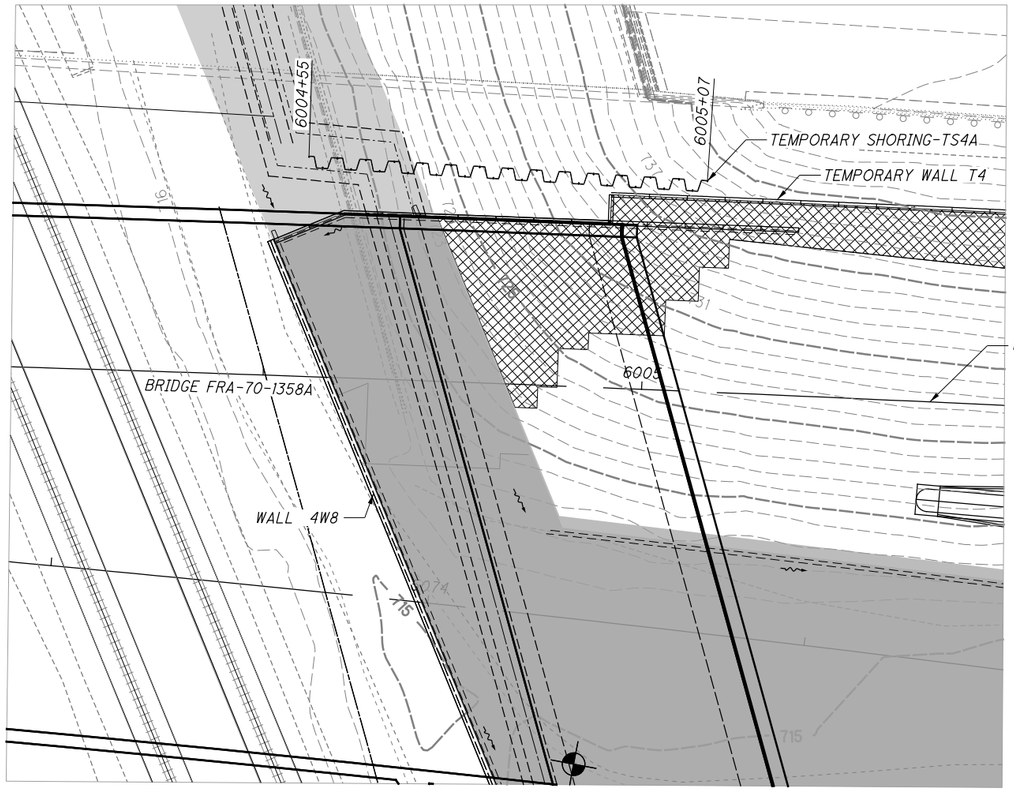
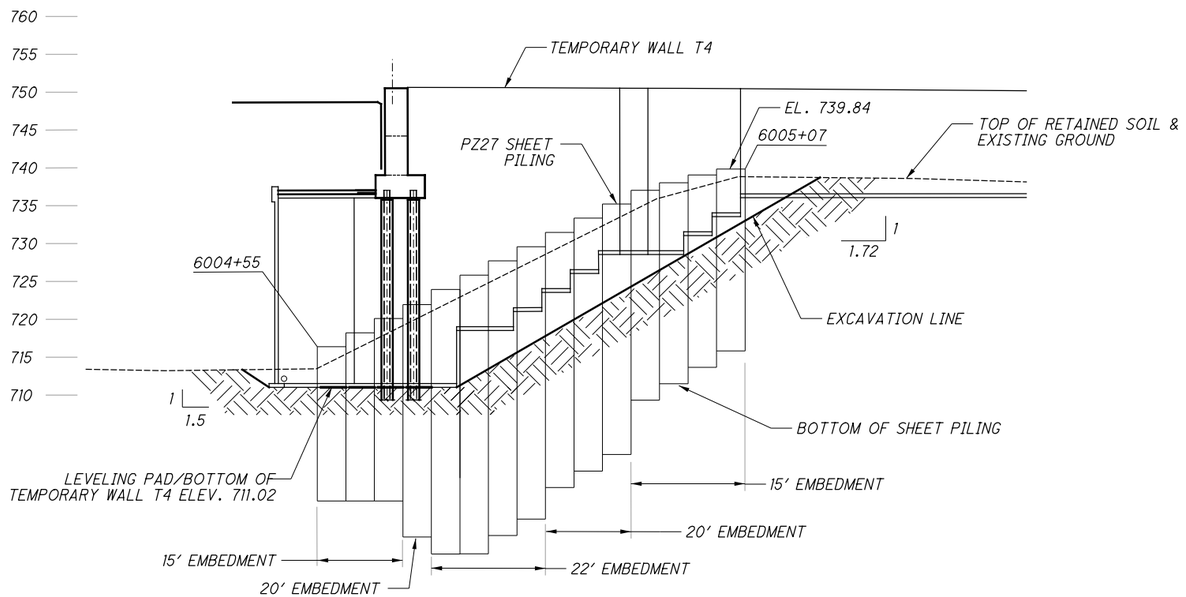


PLAN - TEMPORARY SHORING-TS4A AT NE CORNER, BRIDGE FRA-70-1358A



ELEVATION - TEMPORARY SHORING-TS4A AT NE CORNER, BRIDGE FRA-70-1358A

LEGEND:

- LIMITS OF TEMPORARY WALL T4 EXCAVATION
- LIMITS OF PERMANENT WALL 4W8 EXCAVATION

NOTES:

1. ITEM 503, COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN: THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRIVE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

NO.	DESCRIPTION	REV. BY	DATE
4	NEW SHEET	WCB	11-18-2021

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUBLIN-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T • WWW.DJDYNOTECINC.COM

DESIGNED	DRAWN	REVIEWED	DATE
WCB	WCB	DN	11/12/2021
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DN			

TEMPORARY SHORING SITE PLAN -TS4A

RAMP C5/C6 OVER CSX & NORFOLK SOUTHERN RAILROADS
FRA-70-1358A
FRANKLIN COUNTY
STA. 6004+16.68
STA. 6005+47.90

FRA-70/71-12.68/14.86
PID No. 105523

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FOR I-70 EB PLANS, SEE SHEETS 265 - 303
FOR STRUCTURE PLANS, SEE SHEETS 1472 - 1507
FOR RAMP C5 PLANS, SEE SHEETS 331 - 361
FOR RETAINING WALL DETAILS, SEE SHEETS 831 - 834
FOR RAMP C6 PLANS, SEE SHEETS 362 - 367
FOR ESTIMATED QUANTITIES, SEE SHEETS 230 - 255

CONNECT TO EX. 10" W/12"x10" REDUCER STA. 199+88.94 STA. 4166+40.32, 234.04' RT.

12" TEE & VALVE (RESTRAINED TO TEE) STA 4166+42.63, 229.60' RT.

22.5° HORZ. BEND STA. 200+11.98 STA. 4166+58.35, 222.42' RT.

11.25° HORZ. BEND STA. 200+38.13 STA. 4166+84.45, 224.16' RT.

45° HORZ. BEND STA. 201+04.12 STA. 4167+49.88, 215.62' RT.

45° HORZ. BEND STA. 201+15.77 STA. 4167+55.05, 205.18' RT.

45° HORZ. BEND STA. 199+96.94 STA. 4166+44.01, 226.94' RT.

45° HORZ. BEND STA. 204+57.91 STA. 4166+45.44, 118.93' LT.

12" GATE VALVE W/VALVE BOX STA. 204+90.00 STA. 4166+59.67, 147.70' LT.

12"x8" REDUCER STA. 205+00.00 STA. 4166+64.10, 156.66' LT.

45° HORZ. BEND STA. 205+50.75 STA. 4166+86.60, 202.15' LT.

8" RELOCATED WATERLINE

12" RELOCATED WATERLINE

PROP. WALL NO. 4W10

CAP ENDS

STRUCTURE NO. FRA-70-1358A

STRUCTURE NO. FRA-70-1358R (TO REMAIN)

℄ CONST. I-70 WB

℄ CONST. I-70 EB

℄ CONST. FUTURE I-70 EB

℄ CONST. BIKE PATH DETOUR

℄ CONST. RAMP C5

℄ CONST. RAMP C6

PROP. FENCE

PROP. ℄ W/FENCE

CONST. LIMITS

ex. railroad access road (TO REMAIN)

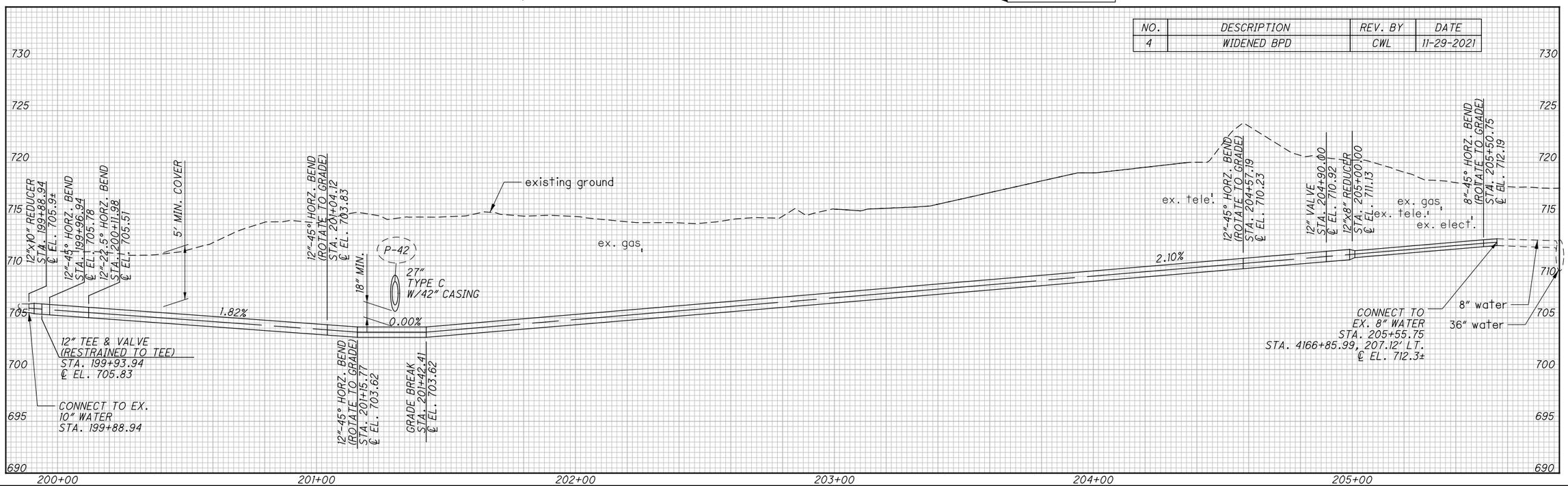
100 YR. FLOOD

P-41 P-42 P-51 P-52 P-100 P-112

D-41 D-51 D-52 D-100

WR-8 WR-9 WR-10 WR-11 WR-13 W-19

NO.	DESCRIPTION	REV. BY	DATE
4	WIDENED BPD	CWL	11-29-2021



HORIZONTAL SCALE IN FEET
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CALCULATED | CHECKED

WATER WORK PLAN AND PROFILE 12" WATERLINE

FRA-70/71-12.68/14.86

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1815

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ITEM SPECIAL – 50'/2 WOOD POLE

THIS ITEM SHALL BE A 50'/2 WOOD POLE.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "50'/2 WOOD POLE" FOR EACH POLE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER. SEE SHEETS 942–958 FOR DETAILS.

ITEM SPECIAL – THREE PHASE DEADEND ATTACHMENTS (TDMIS–406)

THIS ITEM SHALL BE THE THREE PHASE DEADEND ATTACHMENTS PER COLUMBUS DOP TDMIS–406.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "THREE PHASE DEADEND ATTACHMENTS (TDMIS–406)" FOR EACH ATTACHMENT SET WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER. SEE SHEETS 942–958 FOR DETAILS.

ITEM SPECIAL – WOOD CROSSARM (TDMIS–10)

THIS ITEM SHALL BE A WOOD CROSSARM PER COLUMBUS DOP TDMIS–10.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "WOOD CROSSARM (TDMIS–10)" FOR EACH CROSSARM WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER. SEE SHEETS 942–958 FOR DETAILS.

ITEM SPECIAL – PRIMARY DOWN GUY (TDMIS–100)

THIS ITEM SHALL BE A PRIMARY DOWN GUY PER COLUMBUS DOP TDMIS–100.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "PRIMARY DOWN GUY (TDMIS–100)" FOR EACH DOWN GUY WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER. SEE SHEETS 942–958 FOR DETAILS.

ITEM SPECIAL – DISTRIBUTION POLE GROUND (TDMIS–7)

THIS ITEM SHALL BE A DISTRIBUTION POLE GROUND PER COLUMBUS DOP
TDMIS–7.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "DISTRIBUTION POLE GROUND" FOR EACH POLE GROUND WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER. SEE SHEETS 942–958 FOR DETAILS.

ITEM SPECIAL – DISTRIBUTION RISER (TDMIS–1001)

THIS ITEM SHALL BE A DISTRIBUTION RISER AND ALL NECESSARY APPURTENANCES PER COLUMBUS DOP TDMIS–1001.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "DISTRIBUTION RISER (TDMIS–1001)" FOR EACH RISER STRUCTURE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER. SEE SHEETS 942–958 FOR DETAILS.

ITEM SPECIAL – 6" SCH 40 PVC CONDUIT

THIS ITEM SHALL BE 6" SCHEDULE 40 PVC CONDUIT AND ALL NECESSARY APPURTENANCES FOR CONNECTIONS.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "6" SCH 40 PVC CONDUIT" FOR EACH LINEAR FOOT OF CONDUIT WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER. SEE SHEETS 942–958 FOR DETAILS.

ITEM SPECIAL – DOP MANHOLE (TDMIS–1015)

THIS ITEM SHALL BE A DOP MANHOLE PER COLUMBUS DOP TDMIS–1015.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "DOP MANHOLE (TDMIS–1015)" FOR EACH MANHOLE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER. SEE SHEETS 942–958 FOR DETAILS.

ITEM SPECIAL – 30" DIRECTIONAL BORE AND PIPE, 748.06

THIS ITEM SHALL BE 30" DIRECTIONAL BORING AND PIPE, 748.06.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "30" DIRECTIONAL BORE AND PIPE, 748.06" FOR EACH LINEAR FOOT OF DIRECTIONAL BORING AND BORE PIPE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – 4' x 4' x 4' PULLBOX (TDMIS–1012)

THIS ITEM SHALL BE A 4' x 4' x 4' PULLBOX PER COLUMBUS DOP TDMIS–1012.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "4' x 4' x 4' PULLBOX (TDMIS–1012)" FOR EACH PULLBOX WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER. SEE SHEETS 942–958 FOR DETAILS.

ITEM SPECIAL – BRIDGE MOUNTED CONDUIT HANGER

THIS ITEM SHALL BE A BRIDGE MOUNTED CONDUIT SPACER AS SHOWN ON SHEET 1418

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "BRIDGE MOUNTED CONDUIT SPACER" FOR EACH SPACER WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – 6" XHW FIBERGLASS CONDUIT

THIS ITEM SHALL BE 6" XHW FIBERGLASS CONDUIT.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "6" XHW FIBERGLASS CONDUIT" FOR EACH LINEAR FOOT OF CONDUIT WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – (3)–750kCMIL Cu, 15kV XLP INS. 133% w/ Cu TAPE SHIELD WITH (1)–350kCMIL Cu, 600V NEUTRAL

THIS ITEM SHALL BE (3)–750kCMIL Cu, 15kV XLP INS. 133% w/ Cu TAPE SHIELD WITH (1)–350kCMIL Cu, 600V NEUTRAL.
.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "750kCMIL Cu, 15kV XLP INS. 133% w/ Cu TAPE SHIELD" FOR EACH CIRCUIT FOOT OF CONDUCTOR WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – CABLE TRAY RISER

THIS ITEM SHALL BE A CABLE TRAY RISER SYSTEM.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "CABLE TRAY RISER SYSTEM" FOR ALL MATERIAL SHOWN ON SHEETS 923–924 WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – 22.5° SCH 40 PVC CONDUIT SWEEP

THIS ITEM SHALL BE A 22.5° SCH 40 PVC CONDUIT SWEEP.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "22.5° SCH 40 PVC CONDUIT SWEEP" FOR EACH SWEEP WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – FIBERGLASS TO PVC CONDUIT COUPLER

THIS ITEM SHALL BE A FIBERGLASS TO PVC CONDUIT COUPLER.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "FIBERGLASS TO PVC CONDUIT COUPLER" FOR EACH COUPLER WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – ADJUSTING EXISTING GRADE

THIS ITEM SHALL BE THE ADJUSTMENT OF THE EXISTING MANHOLE AND VAULT GRATE TO GRADE.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "ADJUSTING EXISTING GRADE" FOR EACH ADJUSTMENT WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – 5" XHW FIBERGLASS CONDUIT

THIS ITEM SHALL BE 5" XHW FIBERGLASS CONDUIT.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "5" XHW FIBERGLASS CONDUIT" FOR EACH LINEAR FOOT OF CONDUIT WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – (1)–250kCMIL Cu, 15Kv XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)–1/0 Cu, 600V NEUTRAL

THIS ITEM SHALL BE (1)–250kCMIL Cu, 15Kv XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)–1/0 Cu, 600V NEUTRAL.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "(1)–250kCMIL Cu, 15Kv XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)–1/0 Cu, 600V NEUTRAL" FOR EACH CIRCUIT FOOT OF CONDUCTOR WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – 5" SCH 40 PVC CONDUIT

THIS ITEM SHALL BE 5" SCHEDULE 40 PVC CONDUIT AND ALL NECESSARY APPURTENANCES FOR CONNECTIONS.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "5" SCH 40 PVC CONDUIT" FOR EACH LINEAR FOOT OF CONDUIT WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – 3 x 3 CONCRETE DUCT BANK (TDMIS–3000)

THIS ITEM SHALL BE A 3 x 3 CONCRETE DUCT BANK WITH 5" SCH 40 PVC CONDUIT PER COLUMBUS DOP TDMIS–3000.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "3x3 CONCRETE DUCT BANK (TDMIS–3000)" FOR EACH LINEAR FOOT OF CONCRETE DUCT BANK WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER. SEE SHEETS 942–958 FOR DETAILS.

ITEM SPECIAL – 6" FIBERGLASS CONDUIT EXPANSION FITTINGS

THIS ITEM SHALL BE A 6" FIBERGLASS CONDUIT EXPANSION FITTING.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "6" FIBERGLASS CONDUIT EXPANSION FITTING" FOR EACH FITTING WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – 2 x 3 DUCT BANK – 6" PVC (TDMIS–3000) 2

THIS ITEM SHALL BE A 2 x 3 DUCT BANK WITH 6" SCH 40 PVC CONDUIT PER COLUMBUS DOP TDMIS–3000.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "2x3 BANK – 6" PVC (TDMIS–3000)" FOR EACH LINEAR FOOT OF DUCT BANK WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER. SEE SHEETS 942–958 FOR DETAILS.

ITEM SPECIAL – (3)–350kCMIL Cu, 15Kv XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)–4/0 Cu, 600V NEUTRAL

THIS ITEM SHALL BE (3)–350kCMIL Cu, 15Kv XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)–4/0 Cu, 600V NEUTRAL.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "(3)–350kCMIL Cu, 15Kv XLP Ins. 133% w/ Cu TAPE SHIELD WITH (1)–4/0 Cu, 600V NEUTRAL" FOR EACH CIRCUIT FOOT OF CONDUCTOR WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – EXISTING MANHOLE REMOVAL

THIS ITEM SHALL BE THE REMOVAL OF AN EXISTING MANHOLE.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "EXISTING MANHOLE REMOVAL" FOR EACH MANHOLE REMOVED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – 5" FIBERGLASS 90° SWEEP

THIS ITEM SHALL BE A 5" FIBERGLASS 90° SWEEP.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "5" FIBERGLASS 90° SWEEP" FOR EACH SWEEP WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – (3)–#1 AL, 15kV XLP WITH (1)–#2 AI, 600V NEUTRAL

THIS ITEM SHALL BE (3)–#1 AL, 15kV XLP WITH (1)–#2 AI, 600V NEUTRAL.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "(3)–#1 AL, 15kV XLP WITH (1)–#2 AI, 600V NEUTRAL" FOR EACH CIRCUIT FOOT OF CONDUCTOR WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL – 4" SCH 40 PVC CONDUIT

THIS ITEM SHALL BE 4" SCHEDULE 40 PVC CONDUIT AND ALL NECESSARY APPURTENANCES FOR CONNECTIONS.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "4" SCH 40 PVC CONDUIT" FOR EACH LINEAR FOOT OF CONDUIT WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

NO.	DESCRIPTION	REV. BY	DATE
2	DOP TDMIS CHANGE	CWL	11-12-2021
4	UPDATED BORE SPACERS NOTE	CWL	11-29-2021

ITEM SPECIAL – 11.25° SCH 40 PVC CONDUIT SWEEP

THIS ITEM SHALL BE A 11.25° SCH 40 PVC CONDUIT SWEEP.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "11.25° SCH 40 PVC CONDUIT SWEEP" FOR EACH SWEEP WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

ITEM SPECIAL - PADMOUNT TRANSFORMER RELOCATION

THIS ITEM SHALL BE THE RELOCATION OF AN EXISTING PADMOUNT TRANSFORMER, INCLUDING THE NEW FIBERGLASS BOXPAD SIZED PER TRANSFORMER SIZE AND INSTALLED PER MANUFACTURER RECOMMENDATION, GROUNDING, RE-ESTABLISHING ALL SECONDARY CONNECTIONS AND ALL BUSHING AND LOADBREAK ELBOW ACCESSORIES. 2

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "PADMOUNT TRANSFORMER RELOCATION" FOR EACH PADMOUNT TRANSFORMER RELOCATED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

CASTING ALLOWABLE TOLERANCE ON CITY OF COLUMBUS STREETS – AS PER PLAN

FOR ALL MANHOLES, WATERVALVES, TRAFFIC AND INTERCONNECT PULL BOXES, ELECTRIC AND COMMUNICATION VAULTS, AND ANY OTHER UTILITY STRUCTURE IN THE ROADWAY OF CITY OF COLUMBUS STREETS AND ALLEYS WITHIN THE PAVING LIMITS OF THE PROJECT, THE MAXIMUM ALLOWABLE TOLERANCE IS MINUS 1/4 INCH BELOW THE FINISHED PAVEMENT SURFACE. THERE IS NO ALLOWABLE TOLERANCE ABOVE THE FINISHED PAVEMENT SURFACE. ALL PRIVATE UTILITY CASTINGS WILL BE ADJUSTED TO GRADE BY THE PRIVATE UTILITY COMPANY.

THE CONTRACTOR SHALL MAKE EVERY EFFORT TO INSTALL OR ADJUST CASTINGS TO BE WITHIN THIS TOLERANCE. IT IS ALSO THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ODOT PROJECT ENGINEER OF ANY CASTINGS THAT NEED TO BE ADJUSTED TO GRADE THAT WERE NOT PART OF THE PLAN QUANTITIES FOR NEW CONSTRUCTION OR ADJUSTMENT TO GRADE.

MEASUREMENT WILL BE BY PLACING A 10 FOOT STRAIGHTEDGE CENTERED OVER THE CENTER OF THE CASTING IN THE DIRECTION OF TRAFFIC, MEASURED TO VARIOUS POINTS ON THE TOP OF THE CASTING FRAME OF THE STRUCTURE. IF ANY MEASUREMENT EXCEEDS 1/4 INCH, THE CASTING WILL BE DEEMED OUT OF TOLERANCE AND ADJUSTED TO GRADE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.

THE ODOT PROJECT ENGINEER, ALONG WITH ATTENDANCE BY A REPRESENTATIVE OF THE CITY OF COLUMBUS, WILL CONDUCT THE MEASUREMENTS AFTER THE FINAL SURFACE COURSE IS PLACED.

TWO METHODS OF ADJUSTING CASTINGS TO GRADE WILL BE ACCEPTED:

1) SAWCUT THE PAVEMENT AROUND THE CASTING STRUCTURE IN A SQUARE SHAPE. SAWCUT LINE MUST BE AT LEAST 1 FOOT OUTSIDE OF THE OUTER DIAMETER OF THE CASTING. REMOVE PAVEMENT FULL DEPTH AROUND THE CASTING IN ORDER TO COMPLETELY REMOVE THE CASTING STRUCTURE, HEAVY DUTY VALVE BOX, OR OTHER TYPE OF UTILITY STRUCTURE. REMOVE AND CLEAN THE EXISTING FRAME, ADJUST THE HEIGHT OF THE SUPPORTING WALLS, AND RESET THE EXISTING FRAME IN A BED OF CONCRETE MORTAR OR STRUCTURE CONCRETE TO THE NEW GRADE. PLACE CONCRETE PAVEMENT AROUND THE STRUCTURE, HOLDING THE CONCRETE 2 INCHES BELOW THE FINISHED PAVMENT SURFACE. FOR PULLBOXES, MANHOLES AND CASTINGS GREATER THAN 30 INCHES, INCLUDE TWO #4 REBAR EVENLY SPACED ON ALL FOUR SIDES OF THE CASTING IN THE CONCRETE PAVEMENT. ONCE THE CONCRETE HAS PROPERLY CURED, PLACE TACK COAT AND SURFACE ASPHALT PAVEMENT NEATLY AROUND THE STRUCTURE AND SEAL THE JOINT WITH A HOT APPLIED JOINT SEALER PER CITY OF COLUMBUS CMSC ITEM 705.04.

2) SAWCUT THE PAVEMENT AROUND THE CASTING STRUCTURE WITH A LARGER CIRCULAR CUTTING SAW. SAWCUT LINE MUST BE AT LEAST 1 FOOT OUTSIDE OF THE OUTER DIAMETER OF THE CASTING. REMOVE PAVEMENT FULL DEPTH AROUND THE CASTING IN ORDER TO COMPLETELY REMOVE THE CASTING STRUCTURE, HEAVY DUTY VALVE BOX, OR OTHER TYPE OF UTILITY STRUCTURE. REMOVE AND CLEAN THE EXISTING FRAME, ADJUST THE HEIGHT OF THE SUPPORTING WALLS, AND RESET THE EXISTING FRAME IN A BED OF CONCRETE MORTAR OR STRUCTURE CONCRETE TO THE NEW GRADE. PLACE CONCRETE PAVEMENT AROUND THE STRUCTURE FULL DEPTH NEATLY AROUND THE STRUCTURE AND UP TO THE FINISHED GRADE. FOR PULLBOXES, MANHOLES AND CASTINGS GREATER THAN 30 INCHES, INCLUDE TWO CIRCULAR RINGS OF #4 REBAR EVENLY SPACED IN THE CONCRETE PAVEMENT. SEAL JOINT WITH A HOT APPLIED JOINT SEALER PER CITY OF COLUMBUS CMSC ITEM 705.04. 2

ALL CASTINGS BEING ADJUSTED TO GRADE WITH EITHER METHOD MUST BE PROPERLY COVERED WITH A STEEL PLATE DURING THE ADJUSTMENT WORK AND UNTIL THE CONCRETE MATERIAL USED IS PROPERLY CURED. FULL DEPTH IS DEFINED AS FROM THE TOP SURFACE OF THE SURFACE COURSE PAVEMENT TO THE BOTTOM OF THE PAVEMENT BASE MATERIAL. PRIVATE UTILITY COMPANY CASTINGS WILL BE ADJUSTED TO GRADE BY THE PRIVATE UTILITY, WITH NOTICE GIVEN BY THE ODOT PROJECT ENGINEER.

CITY DOP FURNACE STREET SUBSTATION SAFETY PROTOCOL AND REGULATIONS

FOR ALL WORK WITHIN THE CITY OF COLUMBUS DOP FURNACE STREET SUBSTATION, ALL NORMAL SAFETY PROTOCOL AND PRACTICES SHALL BE FOLLOWED FOR WORKING IN AN ENERGIZED SUBSTATION YARD. CITY DOP REQUIRES ALL CONTRACTORS TO TAKE A CITY CONTRACTOR SAFETY COURSE THAT IS ONLINE PRIOR TO PERFORMING ANY WORK.

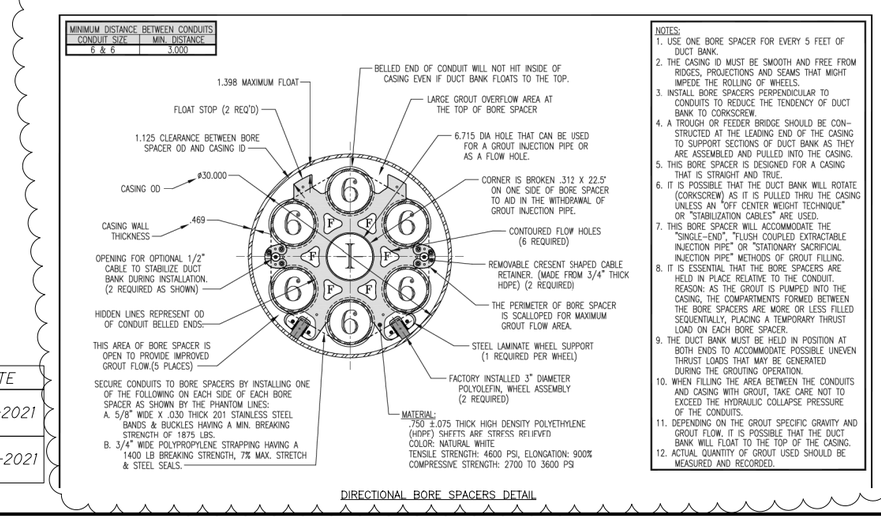
ANY GROUND GRID THAT IS DISTURBED SHALL BE REPAIRED DURING CONSTRUCTION. FENCE SHALL BE IN PLACE THE ENTIRE DURATION OF CONSTRUCTION. ALL FENCE SHALL BE BONDED TO THE GRID. CONTRACTOR SHALL EXCAVATE WITH CARE AND CAUTION. SUBSTATION LIGHTING SHALL BE MAINTAINED. SUBSTATION ACCESS SHALL BE PROVIDED FOR CITY DOP FOR EMERGENCY CASES.

ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO MEET THESE REQUIREMENTS SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS ELECTRICAL PAY ITEMS.

ITEM SPECIAL – DIRECTIONAL BORE SPACERS FOR 6" SCH 40 PVC 4

THIS ITEM SHALL BE DIRECTIONAL BORE SPACERS FOR 6" SCH 40 PVC PER THE DETAIL BELOW OR AS APPROVED EQUAL. CONTRACTOR SHALL USE A THERMAL GROUT AS RECOMMENDED BY THE BORE SPACER MANUFACTURER.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER ITEM SPECIAL, "DIRECTIONAL BORE SPACERS FOR 6" SCH 40 PVC" FOR EACH SPACER WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED INCLUDING ANY NECESSARY GROUT TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.



DIRECTIONAL BORE SPACERS DETAIL

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED TAM | CHECKED PCT

SHEET NUMBER											PARTICIPATION			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
220	963		971	981	985	986	1049				01/NHS/PV	01/NHS/PV	05/NHS/OT/COL						
	550										242	308		621	00100	550	EACH	RPM	
	393										173	220		621	54000	393	EACH	RAISED PAVEMENT MARKER REMOVED	
						15					7	8		625	32000	15	EACH	GROUND ROD	
						4					2	2		625	32001	4	EACH	GROUND ROD, AS PER PLAN	959
240											106	134		626	00102	240	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	
135											59	76		626	00110	135	EACH	BARRIER REFLECTOR, TYPE 2, ONE-WAY	
					817.1						330.7	420.9	65.5	630	02100	817.1	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
					802.1						333.6	424.6	43.9	630	03100	802.1	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
					74.5						32.8	41.7		630	04101	74.5	FT	GROUND MOUNTED SUPPORT, NO. 4 POST, AS PER PLAN	959
						~~42.2~~					~~18.6~~	~~23.6~~		~~630~~	~~07600~~	~~42.2~~	~~FT~~	~~GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12~~	
					⚠	53.0					23.3	29.7		630	08000	53.0	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W12X30	
					86.6						38.1	48.5		630	08004	86.6	FT	ONE WAY SUPPORT, NO. 3 POST	
					4						2	2		630	08200	4	EACH	GROUND MOUNTED SUPPORT, PIPE	
					1						0	1		630	08501	1	EACH	STREET NAME SIGN SUPPORT, AS PER PLAN	959
					42						~~18~~	~~24~~		~~630~~	~~08600~~	~~42~~	EACH	SIGN POST REFLECTOR	
					⚠	4					2	2		630	09000	4	EACH	BREAKAWAY STRUCTURAL BEAM CONNECTION	
						1					0	1		630	21000	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 10	
						4					2	2		630	35500	4	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 6	
						5					2	3		630	45500	5	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8	
						3					1	2		630	74500	3	EACH	OVERHEAD SIGN SUPPORT, MISC.: ANCHOR BOLT	959
						58					26	32		630	75000	58	EACH	SIGN ATTACHMENT ASSEMBLY	
					4						0	1	3	630	79001	4	EACH	SIGN HANGER ASSEMBLY, SPAN WIRE, AS PER PLAN	959
					17						7	8	2	630	79101	17	EACH	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN	959
					5						2	3		630	79500	5	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
					15						3	4	8	630	79501	15	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN	959
					1184.9	268.3	⚠				603.8	768.5	80.9	630	80100	1453.2	SF	SIGN, FLAT SHEET	
					112.0	276.0					170.7	217.3		630	80200	388.0	SF	SIGN, GROUND MOUNTED EXTRUSHEET	
						~~6729.0~~					~~2960.8~~	~~3768.2~~		~~630~~	~~80224~~	~~6729.0~~	SF	SIGN, OVERHEAD EXTRUSHEET	
					9						1	1	7	630	80500	9	EACH	SIGN, DOUBLE FACED, STREET NAME	
					5						2	3		630	81020	5	EACH	CONCRETE MEDIAN BARRIER SIGN BRACKET	
						8					4	4		630	84000	8	EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TC-21.40	
						~~2~~					~~1~~	~~1~~		~~630~~	~~84010~~	~~2~~	EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TC-21.50	
					⚠	4					2	2		630	84500	4	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	
						~~19~~					~~8~~	~~11~~		~~630~~	~~84510~~	~~19~~	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
					4						2	2		630	84600	4	EACH	GROUND MOUNTED PIPE SUPPORT FOUNDATION	
				120							48	61	11	630	84900	120	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
				2							0	1	1	630	85100	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
				10							4	6		630	85400	10	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL	
				121							49	62	10	630	86002	121	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
				15							7	8		630	86102	15	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL	
				2							1	1		630	86272	2	EACH	REMOVAL OF GROUND MOUNTED PIPE SUPPORT AND DISPOSAL	
				3							1	2		630	87100	3	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	
				94							39	50	5	630	87400	94	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
				66							23	30	13	630	87500	66	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	
				6							3	3		630	89702	6	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL	
				8							4	4		630	89902	8	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM: REBOUNDABLE LONGITUDINAL CHANNELIZER TRAFFIC POST	959
							LS					1		630	95000	LS		SIGNING, MISC.: BIKE DETOUR ROUTE	1049
				1							0	1		631	94490	1	EACH	REMOVAL, MISC.: REMOVAL OF SIGN FLASHER ASSEMBLY	959
		86									38	48		644	00601	86	FT	CROSSWALK LINE, AS PER PLAN	959A
		529									233	296		644	00720	529	FT	CHEVRON MARKING	
		327									101	128	98	644	01200	327	FT	PARKING LOT STALL MARKING	
		19									8	11		644	01300	19	FT	LANE ARROW	
		3									1	2		644	01400	3	EACH	WORD ON PAVEMENT, 72"	

NO.	DESCRIPTION	REV. BY	DATE	NO.	DESCRIPTION	REV. BY	DATE
1	ADDED BEAM SIGN	AKF	10/22/21	4	FUNDING CODE CHANGE	CWL	11/29/21

CALCULATED SLB CHECKED AKF

TRAFFIC CONTROL GENERAL SUMMARY - SHEET 1 OF 2

FRA-70/71-12.68/14.86

961
1815

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11/21/2021
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SHEET NUMBER												PARTICIPATION			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
		964	959A	965	971	975						01/NHS/PV	01/NHS/PV	05/NHS/OT/COL						
					6							1	1	4	644	01630	6	EACH	BIKE LANE SYMBOL MARKING	
					10							4	6		644	19000	10	EACH	SHARED LANE MARKING	
				435								191	244		644	30000	435	FT	REMOVAL OF PAVEMENT MARKING	
				15								7	8		644	30020	15	EACH	REMOVAL OF PAVEMENT MARKING	
				0.14								0.06	0.08		644	30030	0.14	MILE	REMOVAL OF PAVEMENT MARKING	
					199							88	111		644	50300	199	FT	PAVEMENT MARKING, MISC.: BIKE LANE DOTTED LINE, 5"	959A
					344							151	193		644	50300	344	FT	PAVEMENT MARKING, MISC.: DOTTED LINE, 5"	959A
					855							376	479		644	50300	855	FT	PAVEMENT MARKING, MISC.: CHANNELIZING LINE, 10"	959A
					259							107	136	16	644	50300	259	FT	PAVEMENT MARKING, MISC.: STOP LINE, 20"	959A
					522							220	279	23	644	50300	522	FT	PAVEMENT MARKING, MISC.: TRANSVERSE / DIAGONAL LINE, 20"	959A
			150											150	644	50300	150	FT	PAVEMENT MARKING, MISC.: SEPARATOR CURB ASSEMBLY	959A
					0.48							0.11	0.15	0.22	644	50400	0.48	MILE	PAVEMENT MARKING, MISC.: EDGE LINE, 5"	959A
					0.34							0.15	0.19		644	50400	0.34	MILE	PAVEMENT MARKING, MISC.: LANE LINE, 5"	959A
					0.22							0.07	0.08	0.07	644	50400	0.22	MILE	PAVEMENT MARKING, MISC.: CENTER LINE, 5"	959A
						0.04						0.01	0.01	0.02	645	90000	0.04	MILE	PAVEMENT MARKING, MISC.: EDGE LINE, 5", TYPE A1	959A
						0.02						0.01	0.01		645	90000	0.02	MILE	PAVEMENT MARKING, MISC.: LANE LINE, 5", TYPE A1	959A
						0.05						0.02	0.02	0.01	645	90000	0.05	MILE	PAVEMENT MARKING, MISC.: CENTER LINE, 5", TYPE A1	959A
						231						102	129		645	98000	231	FT	PAVEMENT MARKING, MISC.: CHANNELIZING LINE, 10", TYPE A1	959A
						94						41	53		645	98000	94	FT	PAVEMENT MARKING, MISC.: DOTTED LINE, 5", TYPE A1	959A
						62						27	35		646	10400	62	FT	STOP LINE	
						238						105	133		646	10620	238	FT	CHEVRON MARKING	
						28						12	16		646	20300	28	EACH	LANE ARROW	
						5						2	3		647	20610	5	EACH	LANE ARROW, TYPE B90	
						1						0	1		647	20710	1	EACH	WORD ON PAVEMENT, 72", TYPE B90	
						3						0	1	2	647	20910	3	EACH	BIKE LANE SYMBOL MARKING, TYPE B90	
						2						1	1		647	20940	2	EACH	SHARED LANE MARKING, TYPE B90	
						1						0	1		647	50100	1	EACH	PAVEMENT MARKING MISC.: BIKE BOX, TYPE B90	959A
						76						20	26	30	647	50120	76	FT	PAVEMENT MARKING, MISC.: STOP LINE, 20", TYPE B90	959A
						24						11	13		647	50120	24	FT	PAVEMENT MARKING, MISC.: TRANSVERSE / DIAGONAL LINE, 20", TYPE B90	959A
						633						209	267	157	647	50120	633	FT	PAVEMENT MARKING, MISC.: CROSSWALK LINE, 10", TYPE B90	959A
						50						22	28		647	50120	50	FT	PAVEMENT MARKING, MISC.: DOTTED LINE, 5", TYPE B90	959A
						568						250	318		647	60020	568	SF	GREEN COLORED PAVEMENT FOR BIKES, TYPE B90	
		77										24	30	23	SPECIAL	690E98000	77	EACH	PARKING METER POST REMOVAL	959A
		19										2	3	14	SPECIAL	690E98000	19	EACH	PARKING METER POST CORE AND PARKING METER POST	959A
		19										2	3	14	SPECIAL	690E98000	19	EACH	PARKING METER POST AND INSTALLATION	959A
					7.98							3.51	4.47		807	14010	7.98	MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6"	
					6.13							2.70	3.43		807	14110	6.13	MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, LANE LINE, 6"	
					0.19							0.08	0.11		807	14200	0.19	MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, CENTER LINE	
					12672							5576	7096		807	14310	12672	FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, CHANNELIZING LINE, 12"	
					8157							3589	4568		807	14410	8157	FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, DOTTED LINE, 6"	
						1.39						0.61	0.78		807	12010	1.39	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6"	
						0.48						0.21	0.27		807	12110	0.48	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	
						4233						1863	2370		807	12310	4233	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	
					14.30							6.29	8.01		850	10010	14.30	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
					8157							3589	4568		850	10110	8157	FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
					12672							5576	7096		850	10130	12672	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)	
						1.87						0.82	1.05		850	20010	1.87	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)	
						4233						1863	2370		850	20130	4233	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (CONCRETE)	

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11/29/21

CALCULATED SLB
CHECKED AKF

GENERAL SUMMARY - SHEET 2 OF 2

TRAFFIC CONTROL

FRA-70/71-12.68/14.86

962
1815

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SHEET NUMBER						PARTICIPATION				ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	1098		1099			01/NHS/ PV	01/NHS/ PV	05/NHS/ OT/COL	06/ENH/ OT/COL						
	7						1		7	625	17961	7	EACH	BRACKET ARM, 8', AS PER PLAN	1085
	1						1			625	18501	1	EACH	BRACKET ARM, 25', AS PER PLAN	1085
	2287					1006	1281			625	23001	2287	FT	NO. 4 AWG 600 VOLT DISTRIBUTION CABLE, AS PER PLAN	1084
	2763					1216	1547			625	23304	2763	FT	NO. 8 AWG 600 VOLT DISTRIBUTION CABLE	1084
	789					347	442			625	23400	789	FT	NO. 10 AWG POLE AND BRACKET CABLE	
	312					137	175			625	25408	312	FT	CONDUIT, 2", 725.051	
	56					25	31			625	25504	56	FT	CONDUIT, 3", 725.051	
	1035					455	580			625	25802	1035	FT	CONDUIT, CONCRETE ENCASED, 2", 725.051	
	1356					411	524	421		625	25920	1356	FT	CONDUIT, MISC.: ENCASED INTERCONNECT CONDUIT BANK, 4-3", 1-1.5", TC-2, SCH 40	1091
	106					47	59			625	25920	106	FT	CONDUIT, MISC.: ENCASED INTERCONNECT CONDUIT BANK, 4-3", 2-2", 1-1.5", TC-2, SCH 40	1091
	31					14	17			625	25920	31	FT	CONDUIT, MISC.: ENCASED INTERCONNECT CONDUIT BANK, 8-3", 1-1.5", TC-2, SCH 40	1091
3	203					89	114			625	25920	203	FT	CONDUIT, MISC.: 1.5", FIBERGLASS REINFORCED, ATTACHED TO STRUCTURE	1085
	622					274	348			625	25920	622	FT	CONDUIT, MISC.: 2", FIBERGLASS REINFORCED, ATTACHED TO STRUCTURE	1085
	1624					715	909			625	25920	1624	FT	CONDUIT, MISC.: 3", FIBERGLASS REINFORCED, ATTACHED TO STRUCTURE	1085
	156					69	87			625	29001	156	FT	TRENCH, AS PER PLAN	1084
	2					1	1			625	31600	2	EACH	PULL BOX, MISC.: 12"X18"	1083, 1084
	1						1			625	31600	1	EACH	PULL BOX, MISC.: CONCRETE 27"	1083, 1084
	9					3	4	2		625	31600	9	EACH	PULL BOX, MISC.: CONCRETE 32"	1083, 1084
	7					3	3	1		625	31600	7	EACH	PULL BOX, MISC.: CONCRETE 48"	1083, 1084
	20					9	11			625	32000	20	EACH	GROUND ROD	
	2					1	1			625	98000	2	EACH	LIGHTING, MISC.: PHOTO CELL	1085
	7								7	625	98000	7	EACH	LIGHTING, MISC.: LUMINAIRE, 150 W LED, 120 V, TEARDROP, BLACK	1085
	5					2	3			630	97700	5	EACH	SIGNING, MISC.: TRAFFIC SIGNAL SIGNS	1085
	3					1	2			632	04911	3	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, ALUMINUM, AS PER PLAN	1085
	15					7	8			632	05007	15	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	1086
	1						1			632	05081	1	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, ALUMINUM, AS PER PLAN	1085
	2					1	1			632	05087	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	1086
	16					7	9			632	20731	16	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	1086
	23					10	13			632	25001	23	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN	1086
	16					7	9			632	25011	16	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD, AS PER PLAN	1086
	8					4	4			632	26001	8	EACH	PEDESTRIAN PUSHBUTTON, AS PER PLAN	1086
	244					107	137			632	29901	244	FT	MESSENGER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES, AS PER PLAN	1091
	3139					1381	1758			632	40700	3139	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
	912					401	511			632	40900	912	FT	SIGNAL CABLE, 9 CONDUCTOR, NO. 14 AWG	
	3						3			632	62820	3	EACH	INTERCONNECT, MISC.: FIBER OPTIC SPLICE ENCLOSURE, CLAMSHELL, 288 SPLICE	1092
	4					2	2			632	64011	4	EACH	SIGNAL SUPPORT FOUNDATION, AS PER PLAN	1086
	4					2	2			632	64020	4	EACH	PEDESTAL FOUNDATION	
	1027					452	575			632	65200	1027	FT	LOOP DETECTOR LEAD-IN CABLE	
	90					40	50			632	68200	90	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
	135					59	76			632	68300	135	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
	2					1	1			632	70001	2	EACH	POWER SERVICE, AS PER PLAN	1085
	2					1	1			632	70400	2	EACH	CONDUIT RISER, 2" DIAMETER	
	7								7	632	81700	7	EACH	COMBINATION SIGNAL SUPPORT, MISC.: CITY OF COLUMBUS DESIGN 4	1088
	1								1	632	81700	1	EACH	COMBINATION SIGNAL SUPPORT, MISC.: CITY OF COLUMBUS DESIGN 13	1088
	2					1	1			632	89300	2	EACH	WOOD POLE	
			1				1			632	89400	1	EACH	DOWN GUY	
			8						8	632	90010	8	EACH	PEDESTAL, MISC.: PEDESTAL, 10.7'	1088
			5			2	3			632	90101	5	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	1086
			1				1			632	90104	1	EACH	REUSE OF TRAFFIC CONTROL ITEM: VIDEO DETECTION CAMERA AND BRACKET ARM	1085
			4			2	2			632	90201	4	EACH	REUSE OF VEHICULAR SIGNAL HEAD, AS PER PLAN	1085
			8			4	4			632	90400	8	EACH	SIGNALIZATION, MISC.: COVERING OF PEDESTRIAN PUSHBUTTON	1086
			1						1	632	90400	1	EACH	SIGNALIZATION, MISC.: MAST ARM (ARM ONLY)	1087
			7			3	4			632	90400	7	EACH	SIGNALIZATION, MISC.: FOUNDATION PRE-EXCAVATION	1086
			4			2	2			632	90400	4	EACH	SIGNALIZATION, MISC.: PEDESTAL ATTACHED TO BRIDGE STRUCTURE	1086
			4			2	2			632	90400	4	EACH	SIGNALIZATION, MISC.: SIGNAL SUPPORT ATTACHED TO BRIDGE STRUCTURE	1086
			2			1	1			632	90400	2	EACH	SIGNALIZATION, MISC.: STOP LINE RADAR DETECTION SYSTEM	1088
			1			0	1			632	90400	1	EACH	SIGNALIZATION, MISC.: POWER METER CABINET, BASE MOUNT, WITH FOUNDATION	1088
			2			1	1			633	67101	2	EACH	CABINET FOUNDATION, AS PER PLAN	1089
			2			1	1			633	99000	2	EACH	CONTROLLER ITEM, MISC.: CONTROLLER UNIT TS2/A2, W/ CABINET 16CH, SIZE 6, GROUND MOUNTED	1092
			4			2	2			633	99000	4	EACH	CONTROLLER ITEM, MISC.: FIBER OPTIC ETHERNET TRANSCEIVER, SHORT RANGE	1092
			2			1	1			633	99000	2	EACH	CONTROLLER ITEM, MISC.: LAYER 2 ETHERNET SWITCH	1092
			202			89	113			804	32060	202	FT	DROP CABLE, 24 FIBER	
			2				2			804	34022	2	EACH	FIBER TERMINATION PANEL, 24 FIBER	1090
			1				1			809	60001	1	1	CCTV IP-CAMERA SYSTEM, DOME-TYPE, AS PER PLAN	1090

NO.	DESCRIPTION	REV. BY	DATE
3	UPDATED QUANTITIES	KMG	11-19-2021
4	FUNDING CODE CHANGE	CWL	11-29-2021

CALCULATED MSS
CHECKED KMG

TRAFFIC SIGNAL GENERAL SUMMARY

FRA-70/71-12.68/14.86

1097
1815

SHEET NUMBER															PART. (01/NHS/PV)	ITEM ⚠	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139							
				94									168		262	625	25502	262	FT	CONDUIT, 3", 725.05	
				1328	2280	3912	2224			2190	2192	2404			16530	625	25752	16530	FT	CONDUIT, 4" MULTICELL, 725.20, AS PER PLAN	
			12												12	625	25900	12	FT	CONDUIT, JACKED OR DRILLED, 2", 725.04	1091
	34														34	625	25900	34	FT	CONDUIT, JACKED OR DRILLED, 3", 725.04	
				94									84		178	625	29100	178	FT	TRENCH, 36" DEEP	
				1	2	3				1	1	2			10	625	29931	10	EACH	MEDIAN JUNCTION BOX, AS PER PLAN	1092
					4	1	3			2	3	2			15	625	31600	15	EACH	PULL BOX, MISC.: 32" ROUND CONCRETE (725.08)	1083,1084
				1		2						1			4	625	31600	4	EACH	PULL BOX, MISC.: 48" ROUND CONCRETE (725.08), TYPE 1, AS PER PLAN	1083,1084
	1	4	5	3											13	625	32000	13	EACH	GROUND ROD	
				1											1	625	34000	1	EACH	POWER SERVICE	
	416	1487	692										244		2839	632	29901	2839	FT	MESSENGER WIRE, 7 STRAND, ¼" DIAMETER WITH ACCESSORIES, AS PER PLAN	1091
	2	2	3												7	632	62820	7	EACH	INTERCONNECT, MISC.: MODIFIED CONDUIT RISER	1123
													1		1	632	62820	1	EACH	INTERCONNECT, MISC.: FIBER OPTIC SPLICE ENCLOSURE, CLAMSHELL, 288 SPLICE	1092
1						2									3	632	62820	3	EACH	INTERCONNECT, MISC.: FIBER OPTIC SPLICE ENCLOSURE, DOME, 800 SPLICE	1092
				109											109	632	68300	109	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
	1	4	5												10	632	89300	10	EACH	WOOD POLE	
	1	2	4												7	632	89400	7	EACH	DOWN GUY	
892			227										700		1819	804	15010	1819	FT	FIBER OPTIC CABLE, 24 FIBER	
840	1105	2292	1906										1910	1957	10010	804	15040	10010	FT	FIBER OPTIC CABLE, 144 FIBER	
				898	1410	3007	1322	2594	801	2555	2617	3479	1963		20646	804	15050	20646	FT	FIBER OPTIC CABLE, 288 FIBER	
			356	21					17				453		847	804	32060	847	FT	DROP CABLE, 24 FIBER	
				1					1						2	804	37000	2	EACH	SPLICE ENCLOSURE, BUTT STYLE	
				948	1605	1248	1322	2594	669						8386	804	98000	8386	FT	FIBER OPTIC CABLE, MISC.: 96 FIBER, AS PER PLAN	1091
661	1105	1261	553												3580	804	98000	3580	FT	FIBER OPTIC CABLE, MISC.: 432 FIBER, AS PER PLAN	1091
				1											1	809	60030	1	EACH	CCTV IP-CAMERA SYSTEM, ENHANCED	
				1											1	809	61002	1	EACH	CCTV CONCRETE POLE, 70 FEET	
				1											1	809	65000	1	EACH	ITS CABINET - GROUND MOUNTED	
				1											1	809	68900	1	EACH	SIDE-FIRED RADAR DETECTOR	

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING SPLIT CHANGE	JML	11-26-2021

CALCULATED ML V
CHECKED JML

ITS GENERAL SUMMARY

FRA-70/71-12.68/14.86

1122
1815

Project Files/GPD/Project 4R/cadd/sheets/
105823ss001_clouded.dgn
11/22/2021 8:20:46 AM
Latham, Joy

SHEET NUM.									PART.					ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1165	1166	1167	1168	1169	1170	1171	1172	1202	01/ NHS/PV	01/ NHS/PV	04/ MPO/OT	05/NHS/ OT/COL	06/ENH/ OT/COL						
12		26	24	27					39	50				625	00450	89	EACH	CONNECTION, FUSED PULL APART	
3			6	3					5	7				625	00470	12	EACH	CONNECTION, UNFUSED BOLTED	
12		21	3	6	15				18	24	15			625	00480	57	EACH	CONNECTION, UNFUSED PERMANENT	
			1							1				625	10490	1	EACH	LIGHT POLE, CONVENTIONAL, DESIGN AT15B40	
3			4						3	4				625	10490	7	EACH	LIGHT POLE, CONVENTIONAL, DESIGN AT18B40	
		3							1	2				625	10490	3	EACH	LIGHT POLE, CONVENTIONAL, DESIGN ST10B40	
		4							2	2				625	10490	4	EACH	LIGHT POLE, CONVENTIONAL, DESIGN ST12B40	
			1							1				625	10490	1	EACH	LIGHT POLE, CONVENTIONAL, DESIGN ST15B40	
			2	9					5	6				625	10490	11	EACH	LIGHT POLE, CONVENTIONAL, DESIGN A12B40	
1										1				625	10490	1	EACH	LIGHT POLE, CONVENTIONAL, DESIGN A18B40	
				3					1	2				625	10494	3	EACH	LIGHT POLE, LOW MAST, DESIGN ALM40	
2									1	1				625	10494	2	EACH	LIGHT POLE, LOW MAST, DESIGN ALM50	
			4						2	2				625	10494	4	EACH	LIGHT POLE, LOW MAST, DESIGN ATLM50	
4		28	12	48					40	52				625	10614	92	EACH	LIGHT POLE ANCHOR BOLTS ON STRUCTURE	
		2							1	1				625	13200	2	EACH	LIGHT TOWER, BBBB100	
1										1				625	13210	1	EACH	LIGHT TOWER, BBBB130	
3			5						4	4				625	14100	8	EACH	LIGHT POLE FOUNDATION, 24" X 8' DEEP	
			4						2	2				625	14200	4	EACH	LIGHT POLE FOUNDATION, 24" X 10' DEEP	
2									1	1				625	14306	2	EACH	MEDIAN LIGHT POLE FOUNDATION, 10' DEEP	
1		2							1	2				625	15300	3	EACH	LIGHT TOWER FOUNDATION, 36" X 30' DEEP	
1										1				625	15500	1	EACH	LIGHT TOWER FOUNDATION, 42" X 30' DEEP	
					1,650				726	924				625	22900	1,650	FT	NO. 1/0 AWG 2400 VOLT DISTRIBUTION CABLE	
1,766		8,010	7,437	12,066	1,761				12,542	15,963	2,535			625	23200	31,040	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	
996		1,074	1,938	1,764					2,540	3,232				625	23400	5,772	FT	NO. 10 AWG POLE AND BRACKET CABLE	
101									44	57				625	24100	101	FT	1-1/2" DUCT CABLE WITH TWO NO. 4 AWG 2400 VOLT CABLES	
3,183		1,172	947						2,333	2,969				625	24320	5,302	FT	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES	
131		1,251	547	2,843	23				2,110	2,685				625	25400	4,795	FT	CONDUIT, 2", 725.04	
161		280	546	802	785				787	1,002	785			625	25500	2,574	FT	CONDUIT, 3", 725.04	
71									31	40				625	25900	71	FT	CONDUIT, JACKED OR DRILLED, 3"	
						847	2,065		1,281	1,631				625	25910	2,912	FT	CONDUIT CLEANED AND CABLES REMOVED	
		7	8	9					11	13				625	26253	24	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, 133W, TYPE II	1163
4									2	2				625	26253	4	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, 133W, TYPE III	1163
12		20							14	18				625	26263	32	EACH	LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, 209W, TYPE V	1163
			4						2	2				625	26273	4	EACH	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, 209W, TYPE III	1163
2				3					2	3				625	26273	5	EACH	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, 209W, TYPE V	1163
					44				19	25				625	27503	44	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN, 67W	1163
		3	3						3	3				625	27503	6	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN, 45W	1163
					169				74	95				625	27504	169	EACH	LUMINAIRE, TUNNEL, SOLID STATE (LED), 240W	1163
					16						16			625	27551	16	EACH	LUMINAIRE, DECORATIVE, AS PER PLAN, RECESSED WALL LIGHT 9W	1193
					5						5			625	27551	5	EACH	LUMINAIRE, DECORATIVE, AS PER PLAN, LED TAPE LIGHT, 3W	1193
					5						5			625	27551	5	EACH	LUMINAIRE, DECORATIVE, AS PER PLAN, LINEAR LED, 6W	1193
2,945		1,436	1,493	612	631				2,864	3,645	608			625	29000	7,117	FT	TRENCH	
			1	1					1	1				625	29910	2	EACH	TRANSITION JUNCTION BOX	
2		8	6	13	3				13	16	3			625	29920	32	EACH	STRUCTURE JUNCTION BOX	
1			3						2	2				625	29930	4	EACH	MEDIAN JUNCTION BOX	
				2					1	1				625	29940	2	EACH	BARRIER JUNCTION BOX	
5		3	3	2	2				5	7	3			625	30700	15	EACH	PULL BOX, 725.08, 18"	
		2		1	2				2	3				625	30706	5	EACH	PULL BOX, 725.08, 24"	
						6	4		4	6				625	31510	10	EACH	PULL BOX REMOVED	
	10	4	9	10					15	18				625	32000	33	EACH	GROUND ROD	
	1		2	3	1				3	4				625	33000	7	EACH	STRUCTURE GROUNDING SYSTEM	
	2			1	2				2	3				625	34001	5	EACH	POWER SERVICE, AS PER PLAN	1163
	1									1				625	35020	1	EACH	RE-ERECT EXISTING LIGHT TOWER	
	2,945	1,436	1,493	612	631				2,864	3,645	608			625	36010	7,117	FT	UNDERGROUND WARNING/MARKING TAPE	
		1	1		3				2	3				625	37101	5	EACH	SERVICE TO UNDERPASS LIGHTING, AS PER PLAN	1163
						9	1		4	6				625	39520	10	EACH	PULL BOX CLEANED	
									LS	LS				SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	1163
						2			1	1				625	75350	2	EACH	LIGHT TOWER REMOVED	

CALCULATED JCS CHECKED LH

LIGHTING GENERAL SUMMARY

FRA-70/71-12.68/14.86

1164
1815

4 11-29-21: REVISED FUNDING CODES

SHEET NUM.									PART.					ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1165	1166	1167	1168	1169	1170	1171	1172	1202	01/ NHS/PV	01/ NHS/PV	04/ MPO/OT	05/NHS/ OT/COL	06/ENH/ OT/COL						
						1								625	75361	1	EACH	LIGHT TOWER REMOVED FOR STORAGE, AS PER PLAN	1175
						8	8		7	9				625	75400	16	EACH	LIGHT POLE REMOVED	
						8	8		7	9				625	75500	16	EACH	LIGHT POLE FOUNDATION REMOVED	
						44	11		24	31				625	75506	55	EACH	LUMINAIRE REMOVED	
						1	1		1	1				625	75510	2	EACH	POWER SERVICE REMOVED	
							3		1	2				625	75521	3	EACH	LUMINAIRE SUPPORT REMOVED, AS PER PLAN	1180
						3			1	2				625	75540	3	EACH	LIGHT TOWER FOUNDATION REMOVED	
						2,842			1,250	1,592				625	75550	2,842	FT	DISTRIBUTION CABLE REMOVED	
						19	12		14	17				625	75801	31	EACH	DISCONNECT CIRCUIT, AS PER PLAN	1163
	2								1	1				625	98000	2	EACH	LIGHTING, MISC.: REFURBISH EXISTING LIGHT TOWER	1163
					3						3			625	98000	3	EACH	LIGHTING, MISC.: SERVICE TO DECORATIVE LIGHTING	1163
					1					1				625	98000	1	EACH	LIGHTING, MISC.: SERVICE TO TUNNEL LIGHTING	1196
						220			97	123				625	98100	220	FT	LIGHTING, MISC.: CONDUIT REMOVED	1163
																		CITY OF COLUMBUS PAY ITEMS	
								6	6					625	98000	6	EACH	LIGHTING, MISC.: UNDERPASS LUMINAIRE, 39W	1202
								1	1					625	98000	1	EACH	LIGHTING, MISC.: MIS-56: RISER, STREET LIGHT CIRCUIT, AS PER PLAN	1202
								2	2					625	98000	2	EACH	LIGHTING, MISC.: MIS-57: 100 AMP METER, SELF-CONTAINED WITH METER SOCKET	1202
								7					7	625	98000	7	EACH	LIGHTING, MISC.: MIS-104: BRACKET ASSEMBLY, TRAFFIC/LIGHT COMB. POLE, DOWNTOWN	1202
								7				2	5	625	98000	7	EACH	LIGHTING, MISC.: MIS-203: STREET LIGHT FOUNDATION, 6', DOWNTOWN	1202
								7				2	5	625	98000	7	EACH	LIGHTING, MISC.: MIS-308: POLE, DOWNTOWN	1202
								14				3	11	625	98000	14	EACH	LIGHTING, MISC.: MIS-501: POLE TO BE WIRED, 3 WIRE	1202
								9	7			2		625	98000	9	EACH	LIGHTING, MISC.: MIS-54: PULL BOX, 13"X24"	1202,1202A
								2	2					625	98000	2	EACH	LIGHTING, MISC.: MIS-54: PULL BOX, AS PER PLAN, 17"X30"	1202,1202A
								5	4			1		625	98000	5	EACH	LIGHTING, MISC.: MIS-502: 3-WIRE RETROFIT LIGHT POLE WITH FOUNDATION	1202
								2	2					625	98000	2	EACH	LIGHTING, MISC.: MIS-603: CONTROLLER, 3 WIRE, 480V, PAD MOUNT	1202
								7					7	625	98000	7	EACH	LIGHTING, MISC.: MIS-801: LUMINAIRE, LED, TEARDROP (120V)	1202
								7				2	5	625	98000	7	EACH	LIGHTING, MISC.: MIS-801: LUMINAIRE, LED, TEARDROP (480V)	1202
								8	3			5		625	98000	8	EACH	LIGHTING, MISC.: MIS-900: FOUNDATION REMOVAL	1202
								4	4					625	98000	4	EACH	LIGHTING, MISC.: SPECIAL: STRUCTURE JUNCTION BOX	1202,1202A
								8	8					625	98000	8	EACH	LIGHTING, MISC.: SPECIAL: NON-METALLIC JUNCTION BOX	1202
								1	1					625	98000	1	EACH	LIGHTING, MISC.: MIS-501, AS PER PLAN: PULL BOX UNDERPASS WIRING	1202
								2,602	2,104			498		625	98100	2,602	FT	LIGHTING, MISC.: MIS-404: UNDERGROUND CIRCUIT, 3 WIRE	1202
								2,093	1,681			412		625	98100	2,093	FT	LIGHTING, MISC.: MIS-700: 2-INCH CONDUIT, CONCRETE ENCASED	1202
								418	418					625	98100	418	FT	LIGHTING, MISC.: SPECIAL: 1-1/4" SCHEDULE 40 PVC CONDUIT	1202
								6	6					625	98100	6	FT	LIGHTING, MISC.: SPECIAL: 3/4" SCHEDULE 40 PVC CONDUIT	1202
								465	465					625	98100	465	FT	LIGHTING, MISC.: SPECIAL: CIRCUIT CABLE - (3) #10 AWG COPPER, XHHW	1202
									LS			LS		625	98200	LS		LIGHTING, MISC.: MIS-901: EXISTING OVERHEAD SYSTEM REMOVAL	1202
									LS			LS		625	98200	LS		LIGHTING, MISC.: MIS-902: EXISTING UNDERGROUND SYSTEM REMOVAL	1202

CALCULATED JCS CHECKED LH

LIGHTING GENERAL SUMMARY

FRA-70/71-12.68/14.86

1164A
1815

4 11-29-21: REVISED FUNDING CODES

LANDSCAPE GENERAL SUMMARY - URBAN AVENUES

CALCULATED RDH | CHECKED JRB

PLAN SHEET NUMBER								PARTICIPATION 04/MPO/OT	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	DETAIL SHEET NO.
1208	1210	1212	1213	1214	1217	1218	1219							
					164	270	118	552	659	10001	552	SY	SEEDING AND MULCHING, AS PER PLAN	1222
					26		26	52	661	20001	52	EACH	DECIDUOUS SHRUB, 15" HEIGHT, AS PER PLAN - RIBES ALPINUM 'GREEN MOUND' - GREEN MOUND ALPINE CURRANT	1222
							12	12	661	20041	12	EACH	DECIDUOUS SHRUB, 24" HEIGHT, AS PER PLAN - VIBURNUM OPULUS 'COMPACTUM' - COMPACT EUROPEAN VIBURNUM	1222
					129		50	161	661	30061	161	EACH	EVERGREEN SHRUB, 2' HEIGHT, AS PER PLAN - BUXUS X 'GREEN VELVET'- GREEN VELVET BOXWOOD	1222
							2	2	661	40141	2	EACH	DECIDUOUS TREE, 4" CALIPER, AS PER PLAN - GLEDISTIA T.I. 'IMPERIAL' - IMPERIAL HONEYLOCUST	1222
					2			2	661	40141	2	EACH	DECIDUOUS TREE, 4" CALIPER, AS PER PLAN - ULMUS PARVIFOLIA 'ALLEE' - LACEBARK ELM	1222
					23			23	661	40141	23	EACH	DECIDUOUS TREE, 4" CALIPER, AS PER PLAN - GINGKO B. 'PRINCETON SENTRY' - PRINCETON SENTRY MAIDENHAIR TREE	1222
							5	5	661	40141	5	EACH	DECIDUOUS TREE, 4" CALIPER, AS PER PLAN - PLATANUS ACERFOLIA 'EXCLAMATION' - EXCLAMATION LONDON PLANE TREE	1222
							16	16	661	99900	16	EACH	PLANTING, MISC: 24" SPREAD, AS PER PLAN - SCHIZACHYRIUM SCOPARIUM 'SMOKE SIGNAL' - SMOKE SIGNAL LITTLE BLUESTEM	1222
						34	5	39	661	99900	39	EACH	PLANTING, MISC: 18" SPREAD, AS PER PLAN - JUNIPERUS SABINA 'BUFFALO' - BUFFALO JUNIPER	1222
					6			6	661	99900	6	EACH	PLANTING, MISC: 14' HEIGHT - CRATAEGUS VIRIDIS 'WINTER KING'- WINTER KING HAWTHORN	1222
					374			374	661	99900	374	EACH	PLANTING, MISC.: 18" SPREAD ARCTOSTAPHYLOS U. 'MASSACHUSETTS'- MASSACHUSETTS BEARBERRY	1222
					102			102	661	99900	102	EACH	PLANTING, MISC.: HELICTRICHON SEMPERVIRENS 'SAPPHIRE'- SAPPHIRE BLUE OATS GRASS	1222
							315	315	661	99900	315	EACH	PLANTING, MISC.: LIRIOPE MUSCARI - BIG BLUE LILY TURF	1222
					605	575	134	1,314	661	99900	1,314	EACH	PLANTING, MISC.: HEDERA HELIX- ENGLISH IVY	1222
						26		26	661	99900	26	EACH	PLANTING, MISC.: PARTHENOCISSUS TRICUSPIDATA- BOSTON IVY	1222
2	1							3	SPECIAL	68014550	3	EACH	TRASH (LITTER) RECEPTACLE	1785
					4		2	6	SPECIAL	69098000	6	EACH	TREE GRATE, 4' X 8'	1224
	16							17	SPECIAL	69098000	17	EACH	LIVINGSTON AVE. PLANTER POT TYPE B	1773
	375							375	SPECIAL	69098100	375	FT	CURB, GRANITE CURB AT LIVINGSTON PLANTERS	1773
750								750	SPECIAL	69098100	750	FT	CURB, PRECAST CONCRETE CURB AT FULTON STREET PLANTERS	1773
1								LS	SPECIAL	69098400	1		PRECAST CONCRETE PLANTERS AT FULTON STREET CANTILEVER	1773
		55	117	66.5				238.5	SPECIAL	69098700	238.5	CY	TURFGRASS SOIL MIX FURNISHED & PLACED, AS PER PLAN (12" DEPTH UPPER HORIZON)	1222
		21	45	25				91	SPECIAL	69098700	91	CY	TURFGRASS BASE MIX FURNISHED & PLACED, AS PER PLAN (4 ½" DEPTH LOWER HORIZON)	1222
		236	60	12				308	SPECIAL	69098700	308	CY	TREE AND PLANTS SOIL MIX FURNISHED & PLACED, AS PER PLAN (24" DEPTH UPPER HORIZON)	1222
		88.5	22.5	5				116	SPECIAL	69098700	116	CY	TREE AND PLANTS BASE MIX FURNISHED & PLACED, AS PER PLAN (9" DEPTH LOWER HORIZON)	1222
		240		236				476	SPECIAL	69098700	476	CY	SAND-BASED STRUCTURAL SOIL MIX FURNISHED & PLACED, AS PER PLAN (24" DEPTH UPPER HORIZON)	1224
		90		88.5				178.5	SPECIAL	69098700	178.5	CY	SAND-BASED STRUCTURAL SOIL BASE MIX FURNISHED & PLACED, (9" DEPTH LOWER HORIZON)	1224

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING SPLIT CODE CHANGE	MKSK/ LHW	11.26.2021

3486-E

GENERAL SUMMARY

LANDSCAPE

FRA-70/71-12.68/14.86

1207
1815

GENERAL NOTES:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15 (REVISED) 07-17-15
AS-2-15 (REVISED) 01-18-19
PCB-91 (REVISED) 07-17-20
PSID-1-13 (REVISED) 01-15-21
SBR-1-13 (REVISED) 07-20-18
SICD-1-96 (REVISED) 07-18-14
SICD-2-14 (REVISED) 01-15-21

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800 DATED 10-15-21
832 DATED 10-19-18

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, 2002 AND THE ODOT BRIDGE DESIGN MANUAL, 2004 EDITION, INCLUDING REVISIONS THROUGH JANUARY 2015.

DESIGN LOADING:
HS25 AND THE ALTERNATE MILITARY LOADING
FUTURE WEARING SURFACE (FWS) = 60 PSF

DESIGN DATA:
CLASS QC2 CONCRETE WITH QC/QA - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

CLASS QC1 CONCRETE WITH QC/QA - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60
MINIMUM YIELD STRENGTH 60,000 PSI

STEEL H-PILES - ASTM A572 GRADE 50 - YIELD STRENGTH 50 KSI

CONCRETE FOR PRESTRESSED BEAMS:

COMPRESSIVE STRENGTH (FINAL) - 7500 PSI
COMPRESSIVE STRENGTH (RELEASE) - 5000 PSI

WELDED WIRE FABRIC:

YIELD STRENGTH - 70 KSI

PRESTRESSING STRAND - ASTM A416 0.6" DIA.

AREA = 0.217 SQ. IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

DECK PROTECTION METHOD:
CLASS QC2 CONCRETE
EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK

EXISTING STRUCTURE VERIFICATION:
DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

EXISTING STRUCTURE PLANS:
PLANS MAY BE EXAMINED BY PROSPECTIVE BIDDERS AT THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 6 OFFICES, 400 E. WILLIAM STREET, DELAWARE, OHIO 43015, PHONE (740) 833-8000.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:
ITEM 202 - APPROACH SLAB REMOVED, AS PER PLAN:

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP AT SUBSTRUCTURE REMOVAL AND FULL DEPTH AT DECK REMOVAL. REMOVE CONCRETE TO A ROUGH SURFACE AT SUBSTRUCTURE REMOVAL LIMITS. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

PILE DRIVING CONSTRAINTS:
PRIOR TO DRIVING PILES AT THE ABUTMENTS, CONSTRUCT THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP AT A 1:1 SLOPE FROM THE TOP OF THE HEEL OF THE FOOTING TO THE SUBGRADE ELEVATION AND FOR A MINIMUM DISTANCE OF 250 FEET BEHIND THE ABUTMENTS. DO NOT BEGIN THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED. AFTER THE FOOTING AND THE BREASTWALL HAVE BEEN CONSTRUCTED, CONSTRUCT THE EMBANKMENT IMMEDIATELY BEHIND THE ABUTMENTS UP TO THE BEAM SEAT ELEVATION AND ON A 1:1 SLOPE UP TO THE SUBGRADE ELEVATION PRIOR TO SETTING THE BEAMS ON THE ABUTMENTS.

PILES TO BEDROCK: DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL. PROVIDE PILE POINTS TO PROTECT THE TIPS OF THE PROPOSED H-PILES AT ALL SUBSTRUCTURE UNITS.

THE ULTIMATE BEARING VALUE IS 148 TONS PER PILE FOR THE HP10x42 ABUTMENT PILES.

ABUTMENT PILES:

32 REAR ABUTMENT PILES AT 60 FEET, ORDER LENGTH AND
20 FORWARD ABUTMENT PILES AT 60 FEET, ORDER LENGTH

PILE SPLICES: IN LIEU OF USING FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.08 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE WELDING IS PERFORMED.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN:
THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF THE EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN:
GLASS FIBER REINFORCED POLYMER (GFRP) PARAPET STIFFENING BARS SHALL BE INCLUDED IN THIS ITEM. SEE SHEET 34 / 41 FOR QUANTITIES.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN:
THIS ITEM SHALL INCLUDE THE BRIDGE DECK, THE END DIAPHRAGMS AT THE ABUTMENTS AND THE EXPANDED POLYSTYRENE FILLER USED TO FORM THE BOTTOM OF THE DIAPHRAGMS.

DECK PLACEMENT ASSUMPTIONS:
THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.43 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103 INCHES.

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 INCHES.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65 INCHES (EXCEPT AT THE RIGHT FORWARD DECK OVERHANG EXCEEDING 4'-0", USE 71 INCHES).

UTILITY LINES:
THE UTILITY(IES) SHALL BEAR ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

PROPOSED BRIDGE WORK AND SEQUENCE OF CONSTRUCTION:
THE WORK TO BE PERFORMED UNDER THIS CONTRACT IS AS SHOWN IN THE CONSTRUCTION PLANS AND, IN GENERAL, INCLUDES THE FOLLOWING:

1. INSTALL PORTABLE CONCRETE BARRIER
2. REMOVE ROADWAY APPROACH PAVEMENT
3. CONSTRUCT COFFERDAMS AND EXCAVATION BRACING
4. SAWCUT DECK SLAB AND REMOVE DECK AND BEAMS
5. SAWCUT PORTIONS OF ABUTMENTS AND REMOVE
6. CONSTRUCT ABUTMENT SUBSTRUCTURE EXTENSIONS
7. CONSTRUCT 4W12 MSE WALL (SEE MSE WALL PLANS FOR DETAILS AND PAYMENT)
8. CONSTRUCT SUPERSTRUCTURE
9. CONSTRUCT APPROACH SLAB AND APPROACH PAVEMENT
10. RELOCATE PORTABLE CONCRETE BARRIER
11. REMOVE REMAINING ROADWAY APPROACH PAVEMENT
12. REMOVE REMAINING DECK SLAB AND BEAMS
13. SAWCUT REMAINING PORTIONS OF ABUTMENT AND REMOVE
14. CONSTRUCT REMAINING ABUTMENT
15. CONSTRUCT REMAINING SUPERSTRUCTURE
16. CONSTRUCT REMAINING APPROACH SLAB AND APPROACH PAVEMENT

ASBESTOS SURVEY:
AN ASBESTOS SURVEY FOR THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION WORK WAS CONDUCTED BY A LICENSED ASBESTOS HAZARD EVALUATION SPECIALIST. THE ASBESTOS INSPECTION REPORT DID NOT IDENTIFY THE PRESENCE OF ANY ASBESTOS CONTAINING MATERIALS ABOVE REGULATORY LIMITS. A COPY OF THE ASBESTOS INSPECTION REPORT FOR THE STRUCTURE IS INCLUDED IN THE PLAN PACKAGE FOR THIS PROJECT.

ELECTRONIC SUBMISSION:
SUBMIT A COMPLETED ELECTRONIC NOTIFICATION OF DEMOLITION AND RENOVATION FORM (NDRF), APPLICABLE FEES, AND THE ASBESTOS INSPECTION REPORT TO THE OEPA AT LEAST 10 DAYS PRIOR TO ANY DEMOLITION ACTIVITY, RENOVATION ACTIVITY, OR BOTH. SUBMIT THE NDRF AND PAYMENT ALONG WITH THE ASBESTOS INSPECTION REPORT USING THE OEPA EBUSINESS CENTER. SUBMIT ONE ELECTRONIC PDF COPY AND ONE HARD COPY OF THE NDRF TO THE ENGINEER. THE ENGINEER WILL PROVIDE ONE COPY TO THE DISTRICT ENVIRONMENTAL STAFF.

HARD COPY SUBMISSION:
THE CONTRACTOR MAY SUBMIT A HARD COPY OF THE COMPLETED NDRF AND PAYMENT ALONG WITH THE ASBESTOS INSPECTION REPORT. FOLLOW THE MAILING INSTRUCTIONS ON THE NDRF. CHECK WITH LOCAL HEALTH DEPARTMENT, COLUMBUS PUBLIC HEALTH, 240 PARSONS AVE., COLUMBUS, OHIO 43215, (614) 645-7005, TO DETERMINE IF THEY REQUIRE A HARD COPY SUBMITTAL.

SUBMIT THE COMPLETED NDRF TO OEPA AT LEAST 10 DAYS PRIOR TO DEMOLITION ACTIVITY, RENOVATION ACTIVITY, OR BOTH. RETAIN TWO HARD COPIES OF THE NDRF AND SUBMIT ONE COPY TO THE ENGINEER AND EMAIL ONE COPY TO THE ODOT DISTRICT ENVIRONMENTAL COORDINATOR AT: janice.gartner@dot.ohio.gov.

BASIS OF PAYMENT:
THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIALS NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

4

NUMBER	DESCRIPTION	REVISED BY	DATE
4	ADDED ASBESTOS NOTE	CAS	11-29-2021

3486-E

BURGESS & NIPLE
Engineers ■ Architects ■ Planners
5085 REED ROAD, COLUMBUS, OHIO 43220

DESIGNED TTK | DRAWN AAA | REVIEWED JCS | DATE 10/17/18
CHECKED CAS | REVISED | STRUCTURE FILE NUMBER 2504669

GENERAL NOTES
FRA-70-1282R
RAMP C5 OVER SOUDER AVE.

FRA-70/71-12.68/
14.86 (PROJ. 4R)
PID No. 105523

4 / 41

1231
1815

P:\PR5178\fra\77372\structures\FRA070_1282R\Stage 2\Sheets\070_1282RGN001.dgn 11/24/2021 10:23:41 AM dlbey

ESTIMATED QUANTITIES

				CALC.		DATE	CHK'D	CHK'D	DATE
				JHL		12/31/2014	ABP	ABP	1/5/2015
ITEM	ITEM EXT.	UNIT	DESCRIPTION	ABUTMENTS	SUPERSTR.	GENERAL	TOTAL	PARTICIPATION 03/NHS/BR	SHT. REF.
202	11203		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	LS 4	4, 6, 7, 8/41
202	22901	SY	APPROACH SLAB REMOVED, AS PER PLAN			320	320	320	4, 6, 7, 8/41
202	23500	SY	WEARING COURSE REMOVED		519	320	839	839	
503	11101		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN				LS	LS	4 & 12-16/41
503	21100	CY	UNCLASSIFIED EXCAVATION	395			395	395	
505	11100		PILE DRIVING EQUIPMENT MOBILIZATION				LS	LS	
507	00100	FT	STEEL PILES HP10X42, FURNISHED	3,120			3,120	3,120	
507	00150	FT	STEEL PILES HP10X42, DRIVEN	2,860			2'860	2,860	
507	93300	EACH	STEEL POINTS OR SHOES	52			52	52	
509	10001	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	41,233	79,646	1,109	121,988	121,988	4/41
510	10000	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	220			220	220	
511	21523	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN		380		380	380	4/41
511	33500	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2			2	2	
511	34450	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)		21		21	21	
511	44112	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	289			289	289	
511	46512	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	163			163	163	
511	53010	CY	CLASS QC1 CONCRETE, MISC.: MOMENT SLAB AND PARAPET WITH QC/QA			8	8	8	39/41
512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	587	299	118	1,004	1,004	
512	33000	SY	TYPE 2 WATERPROOFING	26	5		31	31	
515	14080	EACH	STRAIGHT STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 2, TYPE WF42-49		10		10	10	
			(67'-6" BEAM LENGTH)						
515	20001	EACH	INTERMEDIATE DIAPHRAGMS, AS PER PLAN		9		9	9	25/41
516	10010	FT	ARMORLESS PREFORMED JOINT SEAL			221	221	221	36-38/41
516	13600	SF	1" PREFORMED EXPANSION JOINT FILLER	250		15	265	265	
516	13900	SF	2" PREFORMED EXPANSION JOINT FILLER		81	67	148	148	
516	14020	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	241			241	241	
516	44301	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE),		20		20	20	35/41
			AS PER PLAN (BEARING: 1'-8" x 1'-2" x 4½", LOAD PLATE: 1'-9" x 1'-3" x 1½")						
518	21200	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	241			241	241	
518	40000	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	110			110	110	
518	40010	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	10			10	10	
526	30011	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN			729	729	729	36 & 37/41
526	90030	FT	TYPE C INSTALLATION			221	221	221	

NUMBER	DESCRIPTION	REVISED BY	DATE
4	FUNDING PARTICIPATION CHANGE	CAS	11-29-2021

3486-E

BURGESS & NIPLE
Engineers ■ Architects ■ Planners
5085 REED ROAD, COLUMBUS, OHIO 43220

DESIGNED JHL | DRAWN JHL | REVIEWED CAS | DATE 10/17/18
CHECKED ABP | REVISED | STRUCTURE FILE NUMBER 2504669

ESTIMATED QUANTITIES
FRA-70-1282R
RAMP C5 OVER SOUDER AVE.

FRA-70/71-12.68/14.86 (PROJ. 4R)
PID No. 105523

5 / 41

1232
1815

ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	PARTICIPATION 02/NHS/BR	UNIT	DESCRIPTION	ABUT.	CALC'D SJA PIERS	DATE 12/10/2014 SUPER.	CHK'D XAC GEN.	DATE 12/23/2014 SHEET REF.
202	11201	LUMP	LUMP 4		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN					10 / 64
202	22900	52	52	SY	APPROACH SLAB REMOVED				52	
202	98100	1	1	EACH	REMOVAL MISC.: VERTICAL PILE				1	6 / 64
202	98100	10	10	EACH	REMOVAL MISC.: BATTERED PILE				10	6 / 64
503	11100	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING					
503	21100	522	522	CY	UNCLASSIFIED EXCAVATION	82	440			
505	11100	LUMP	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION					
507	00100	1995	1995	FT	STEEL PILES HP10X42, FURNISHED	1995				
507	00150	1890	1890	FT	STEEL PILES HP10X42, DRIVEN	1890				
507	00300	3475	3475	FT	STEEL PILES HP14X73, FURNISHED		3475			
507	00350	3210	3210	FT	STEEL PILES HP14X73, DRIVEN		3210			
507	93300	74	74	EACH	STEEL POINTS OR SHOES	21	53			
509	10001	492817	492817	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	14126	146718	331973		6, 61-63 / 64
511	21523	1143	1143	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN			1143		6 / 64
511	34450	298	298	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			298		
511	41012	45	45	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS (CAP AND COLUMN)		45			
511	42012	495	495	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS (T-TYPE)		495			
511	44112	48	48	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	48				
511	45602	347	347	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA	76	271			
511	46512	324	324	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	69	255			
512	10100	6206	6206	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	99	1361	4746		
513	95030	2	2	EACH	STRUCTURAL STEEL, MISC.: PARAPET SLIDING PLATE JOINT			2		
515	16000	32	32	EACH	PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, MISC.: LEVEL 3, TYPE WF78-49			32		
515	20000	72	72	EACH	INTERMEDIATE DIAPHRAGMS			72		
SPECIAL	51612400	28	28	FT	MODULAR EXPANSION JOINT			28		7 / 64
516	13600	36	36	SF	1" PREFORMED EXPANSION JOINT FILLER		36			
516	13900	28	28	SF	2" PREFORMED EXPANSION JOINT FILLER		28			
516	44100	8	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (9" x2'-8"x2¼")			8		
516	44100	8	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (10" x2'-10"x2¼")			8		
516	44101	4	4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (9"x2'-10"x2½") (PTFE)			4		8 / 64
516	44101	12	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10"x2'-10"x2½") (PTFE)			12		8 / 64
516	44101	8	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (11"x2'-10"x2½") (PTFE)			8		8 / 64
516	44200	8	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (10"x2'-8"x3")			8		
516	44200	16	16	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-1"x2'-8"x4")			16		
518	12300	1	1	EACH	SCUPPERS, INCLUDING SUPPORTS			1		
518	21200	66	66	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	66				
518	40000	57	57	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	57				
518	40010	15	15	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	15				
524	94904	16	16	FT	DRILLED SHAFTS, 48" DIAMETER, INTO BEDROCK		16			
524	94906	268	268	FT	DRILLED SHAFTS, 54" DIAMETER, ABOVE BEDROCK		268			
524	95100	4	4	EACH	DRILLED SHAFTS, MISC.: THERMAL INTEGRITY PROFILER (T.I.P.) WIRE CABLE TESTING OF DRILLED SHAFTS		4			7 / 64
526	30010	94	94	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")				94	
526	90010	29	29	FT	TYPE A INSTALLATION				29	
601	21000	249	249	SY	CONCRETE SLOPE PROTECTION				249	

TABLE A - PAY ITEMS FOR PIER CONCRETE COMPONENTS

PIER NO.	CAP	STEM/COLUMNS
1	C	B
2	C	B
3	C	B
4	C	B
5	C	B
6	C	A
7	C	A

A = ITEM 41012 (CAP AND COLUMN)
B = ITME 42012 (T-TYPE)
C = ITEM 45602 (MASS CONCRETE)

NUMBER	DESCRIPTION	REVISED BY	DATE
4	FUNDING PARTICIPATION CHANGE	CAS	11-29-2021

3486-E

BURGESS & NIPLE
Engineers ■ Architects ■ Planners
5085 REED ROAD, COLUMBUS, OHIO 43220

REVIEWED CAS DATE 10/18/18
STRUCTURE FILE NUMBER 2510014
DRAWN AAA REVISED
DESIGNED SJA CHECKED XAC

ESTIMATED QUANTITIES
FRA-70-1301A
RAMP C5 OVER SR 315

FRA-70/71-12.68/14.86 (PROJ. 4R)
PID No. 105523

9 / 64

1277
1815

ESTIMATED QUANTITIES

ITEM	ITEM EXT.	UNIT	DESCRIPTION	ABUTMENT	PIER	SUPERSTR.	CALC. JDH GENERAL	DATE 3/6/2015 TOTAL	CHECKED BEN PARTICIPATION 02/NHS/BR 4	DATE 3/24/2015 SHEET REF.
505	11100		PILE DRIVING EQUIPMENT MOBILIZATION	LS				LS	LS	
507	00100	FT	STEEL PILES HP10X42, FURNISHED	800				800	800	
507	00150	FT	STEEL PILES HP10X42, DRIVEN	760				760	760	
507	93300	EACH	STEEL POINTS OR SHOES	8				8	8	
509	10001	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	6,094	11,434	70,330		87,858	87,858	3/31
510	10000	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT		16			16	16	
511	21523	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN			194		194	194	3/31
511	34450	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			54		54	54	
511	41510	CY	CLASS QC1 CONCRETE, PIER ABOVE FOOTINGS		30			30	30	
511	44110	CY	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING	39				39	39	
511	45600	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE		32			32	32	
511	46510	CY	CLASS QC1 CONCRETE, FOOTING	25				25	25	
512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	77		712	52	841	841	
512	33000	SY	TYPE 2 WATERPROOFING	72				72	72	
513	95030	EACH	STRUCTURAL STEEL, MISC.: PARAPET SLIDING PLATE JOINT			2		2	2	26/31
515	15020	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4			8		8	8	
			(BEAM LENGTH VARIES 67'-3 3/8" TO 103'-2 5/8")						18	12/31
515	20001	EACH	INTERMEDIATE DIAPHRAGMS, AS PER PLAN			18		18	32	
516	11210	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			32		32	44	
516	13900	SF	2" PREFORMED EXPANSION JOINT FILLER	44				44	8	27/31
516	44101	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (BEARING: 16.5" x 11.5" x 2.25")			8		8		
516	44201	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (BEARING: 16" x 15" x 4")			8		8	8	27/31
518	21200	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	23				23	23	
518	40000	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	32				32	32	
524	94908	FT	DRILLED SHAFTS, 54" DIAMETER, INTO BEDROCK		9			9	9	
524	94915	FT	DRILLED SHAFTS, 60" DIAMETER, ABOVE BEDROCK, AS PER PLAN		136			136	136	3/31
524	95100	EACH	DRILLED SHAFTS, MISC.: THERMAL INTEGRITY PROFILER (T.I.P.) WIRE CABLE TESTING OF DRILLED SHAFTS		2			2	2	3/31
526	30011	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN				105	105	105	3/31
526	90010	FT	TYPE A INSTALLATION				32	32	32	

NUMBER	DESCRIPTION	REVISED BY	DATE
4	FUNDING PARTICIPATION CHANGE	CAS	11-29-2021

3486-E

BURGESS & NIPLE
Engineers ■ Architects ■ Planners
5085 REED ROAD, COLUMBUS, OHIO 43220

DESIGNED BES | CHECKED MAB
DRAWN AAA | REVISED
REVIEWED CAS | DATE 10/18/18 | STRUCTURE FILE NUMBER 2510013

ESTIMATED QUANTITIES
BRIDGE NO. FRA-71-1518A
RAMP A5 OVER THE SCIOTO RIVER

FRA-70/71-12.68/14.86 (PROJ. 4R)
PID No. 105523

1336
1815

ESTIMATED QUANTITIES

CALCULATED: RFV DATE: 5-29-19
CHECKED: TJW DATE: 5-30-19

ITEM	EXT.	TOTAL 02/NHS/BR (4)	UNITS	DESCRIPTION	ABUTMENT	PIER	SUPER.	GENERAL	A.P.P. REFERENCE SHEET NO.
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING					
503	21100	767	CY	UNCLASSIFIED EXCAVATION	767				
505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION					
507	00100	1,890	FT	STEEL PILES HP10X42, FURNISHED	1,890				
507	00150	1,755	FT	STEEL PILES HP10X42, DRIVEN	1,755				
507	93300	27	EACH	STEEL POINTS OR SHOES	27				
509	10001	895,729	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	23,664	216,790	655,275		8
511	34447	2,274	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN			2,274		8
511	34450	326	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			326		
511	43512	289	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	289				
511	45602	1,236	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA		1236			
512	10100	4,775	SY	SEALING CONCRETE SURFACES (EPOXY-URETHANE)	222	2309	2244		
513	10300	2,355,836	LB	STRUCTURAL STEEL MEMBERS, LEVEL 5			2,355,836 (2)		
513	10401	1,495,251	LB	STRUCTURAL STEEL MEMBERS, HYBRID GIRDER, LEVEL SIX (6) FABRICATION, AS PER PLAN			1,495,251		8
513	20000	27,788	EACH	WELDED STUD SHEAR CONNECTORS			27,788		
513	95030	6	EACH	STRUCTURAL STEEL, MISC.: PARAPET SLIDING PLATE JOINT			6		8
514	00060	3,476	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			3,476		
514	00066	3,476	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			3,476		
514	10000	3	EACH	FINAL INSPECTION REPAIR			3		
516	12400	163	FT	SPECIAL - MODULAR EXPANSION JOINT			163		8
516	44101	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (1'-5" DIA.) (PTFE)			10		10
516	44101	6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (1'-6 1/2" DIA.) (PTFE)			6		10
518	12301	8	EACH	SCUPPER, INCLUDING SUPPORTS, AS PER PLAN			8		64
518	21200	81	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	81				
518	40000	100	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	100				
518	40010	30	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	30				
518	51201	60	FT	PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN (DIAMETER = 10")		60			65
518	60031	15	FT	PIPE HORIZONTAL CONDUCTOR, AS PER PLAN			15		66
524	94919	107	FT	DRILLED SHAFTS, 60" DIAMETER, INTO BEDROCK, AS PER PLAN		107			11
524	94931	814	FT	DRILLED SHAFTS, 66" DIAMETER, ABOVE BEDROCK, AS PER PLAN		814			11
524	94931	235	FT	DRILLED SHAFTS, 66" DIAMETER, ABOVE BEDROCK, AS PER PLAN, PIER 4		235			11
524	94935	36	FT	DRILLED SHAFTS, 66" DIAMETER, INTO BEDROCK, AS PER PLAN		36			11
524	94947	182	FT	DRILLED SHAFTS, 72" DIAMETER, ABOVE BEDROCK, AS PER PLAN		182			11
526	30010	187	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")				187	
526	90010	85	FT	TYPE A INSTALLATION				85	
601	21000	870	SY	CONCRETE SLOPE PROTECTION				870	
601	32104	1,190	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC				1190	
869	00101	28	EACH	HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS, AS PER PLAN			28		11
SPECIAL	69098100	181	FT	COVERED WALKWAY SYSTEM				181	7

NO.	DESCRIPTION	REV. BY	DATE	NO.	DESCRIPTION	REV. BY	DATE
2	REVISED QUANTITY	MOJ	11-12-2021	4	FUNDING CODE CHANGE	CWL	11-29-2021

DESIGN AGENCY
GPD GROUP.
Cities, P.Vs, Schools, Burns & Dickerson, Inc.
8000 Walton Parkway, Suite 210, Columbus, Ohio 43215 614.210.0751

DESIGNED TJW | CHECKED RHC
DRAWN MLS | REVISED
REVIEWED DGN | DATE 9-6-19 | STRUCTURE FILE NUMBER 2510015

ESTIMATED QUANTITIES
BRIDGE NO. FRA-70-1321A
RAMP A5/B5/C5 OVER THE SCIOTO RIVER

FRA-70/71-12.68/14.86
PID No. 105523

1375
1815

ESTIMATED QUANTITIES								
ITEM	EXT.	TOTAL	PARTICIPATION 01/NHS/PV	PARTICIPATION 01/NHS/PV	UNIT	DESCRIPTION	GENERAL	AS PER PLAN SHEET __/1815
202	11203	LS	LS	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LUMP	1462A
202	22900	187	82	105	SY	APPROACH SLAB REMOVED	187	

NO.	DESCRIPTION	REV. BY	DATE
3	UPDATED NOTE	CWL	11-19-2021
4	FUNDING CODE CHANGE / ADDED ASBESTOS NOTE	CWL	11-29-2021

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN 3

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE ENTIRE STRUCTURE NOT ALREADY REMOVED UNDER SEPARATE ITEMS EXCEPT THE LEFT FORWARD WINGWALL (LABELED "RETAINING WALL C" IN THE EXISTING PLANS), THE EXISTING MEDIAN BARRIER AND EXISTING WB-70 CONCRETE BARRIER, WHICH ARE TO REMAIN. CONTRACTOR SHALL USE CAUTION DURING REMOVAL OF THE STRUCTURE TO KEEP THE EXISTING MEDIAN BARRIER AND EXISTING WB-70 CONCRETE BARRIER INTACT WITHOUT UNNECESSARY DAMAGE. THE EXISTING VERTICAL EXPANSION JOINT (FILLED WITH 1" P.E.J.F.) BETWEEN THE WINGWALL AND ABUTMENT IS TO SERVE AS THE REMOVAL LIMIT. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE EXISTING PLANS, PERFORMING THE EXISTING STRUCTURE VERIFICATION, AND DETERMINING REMOVAL EFFORTS. EXISTING PLANS MAY BE EXAMINED BY PROSPECTIVE BIDDERS AT THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 6 OFFICES, 400 E. WILLIAM ST., DELEWARE, OHIO 43015 (PHONE 740-833-8000). ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CMS 202 AND CMS 501.05.

ASBESTOS SURVEY

AN ASBESTOS SURVEY FOR THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION WORK WAS CONDUCTED BY A LICENSED ASBESTOS HAZARD EVALUATION SPECIALIST. THE ASBESTOS INSPECTION REPORT DID NOT IDENTIFY THE PRESENCE OF ANY ASBESTOS CONTAINING MATERIALS ABOVE REGULATORY LIMITS. A COPY OF THE ASBESTOS INSPECTION REPORT FOR THE STRUCTURE IS INCLUDED IN THE PLAN PACKAGE FOR THIS PROJECT.

ELECTRONIC SUBMISSION:

SUBMIT A COMPLETED ELECTRONIC NOTIFICATION OF DEMOLITION AND RENOVATION FORM (NDRF), APPLICABLE FEES, AND THE ASBESTOS INSPECTION REPORT TO THE OEPA AT LEAST 10 DAYS PRIOR TO ANY DEMOLITION ACTIVITY, RENOVATION ACTIVITY, OR BOTH. SUBMIT THE NDRF AND PAYMENT ALONG WITH THE ASBESTOS INSPECTION REPORT USING THE OEPA EBUSINESS CENTER. SUBMIT ONE ELECTRONIC PDF COPY AND ONE HARD COPY OF THE NDRF TO THE ENGINEER. THE ENGINEER WILL PROVIDE ONE COPY TO THE DISTRICT ENVIRONMENTAL STAFF.

HARD COPY SUBMISSION:

THE CONTRACTOR MAY SUBMIT A HARD COPY OF THE COMPLETED NDRF AND PAYMENT ALONG WITH THE ASBESTOS INSPECTION REPORT. FOLLOW THE MAILING INSTRUCTIONS ON THE NDRF. CHECK WITH LOCAL HEALTH DEPARTMENT (COLUMBUS PUBLIC HEALTH, 240 PARSONS AVE. COLUMBUS, OH 43215, 614-645-7005) TO DETERMINE IF THEY REQUIRE A HARD COPY SUBMITTAL.

SUBMIT THE COMPLETED NDRF TO OEPA AT LEAST 10 DAYS PRIOR TO DEMOLITION ACTIVITY, RENOVATION ACTIVITY, OR BOTH. RETAIN TWO HARD COPIES OF THE NDRF AND SUBMIT ONE COPY TO THE ENGINEER AND EMAIL ONE COPY TO THE ODOT DISTRICT ENVIRONMENTAL COORDINATOR AT: Janice.Gartner@dot.ohio.gov

BASIS OF PAYMENT:

THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIALS NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN. 4

EXISTING STRUCTURE

TYPE:	TWO SPAN CONTINUOUS STEEL GIRDER BRIDGE WITH NON-COMPOSITE REINFORCED CONCRETE DECK AND SUBSTRUCTURE UNITS
SPANS:	132'-0"±, 132'-0"± C/C BEARINGS MEASURED ALONG ℄ ORIGINAL SURVEY
RAODWAY:	28'-0" F/F OF 2'-0" SAFETY CURBS 34'-0" O/O DECK
SKEW:	55°0'0" RF REAR ABUTMENT AND PIER 52°0'0" RF FORWARD ABUTMENT MEASURED TO ORIGINAL REFERENCE TANGENT
LOADING:	HS20-44
DATE BUILT:	1975
STRUCTURE FILE NUMBER (SFN):	2504464
APPROACH SLABS:	30'-0" LONG, AS-1-69
WEARING SURFACE:	1" MONOLITHIC CONCRETE
DISPOSITION:	TO BE REMOVED

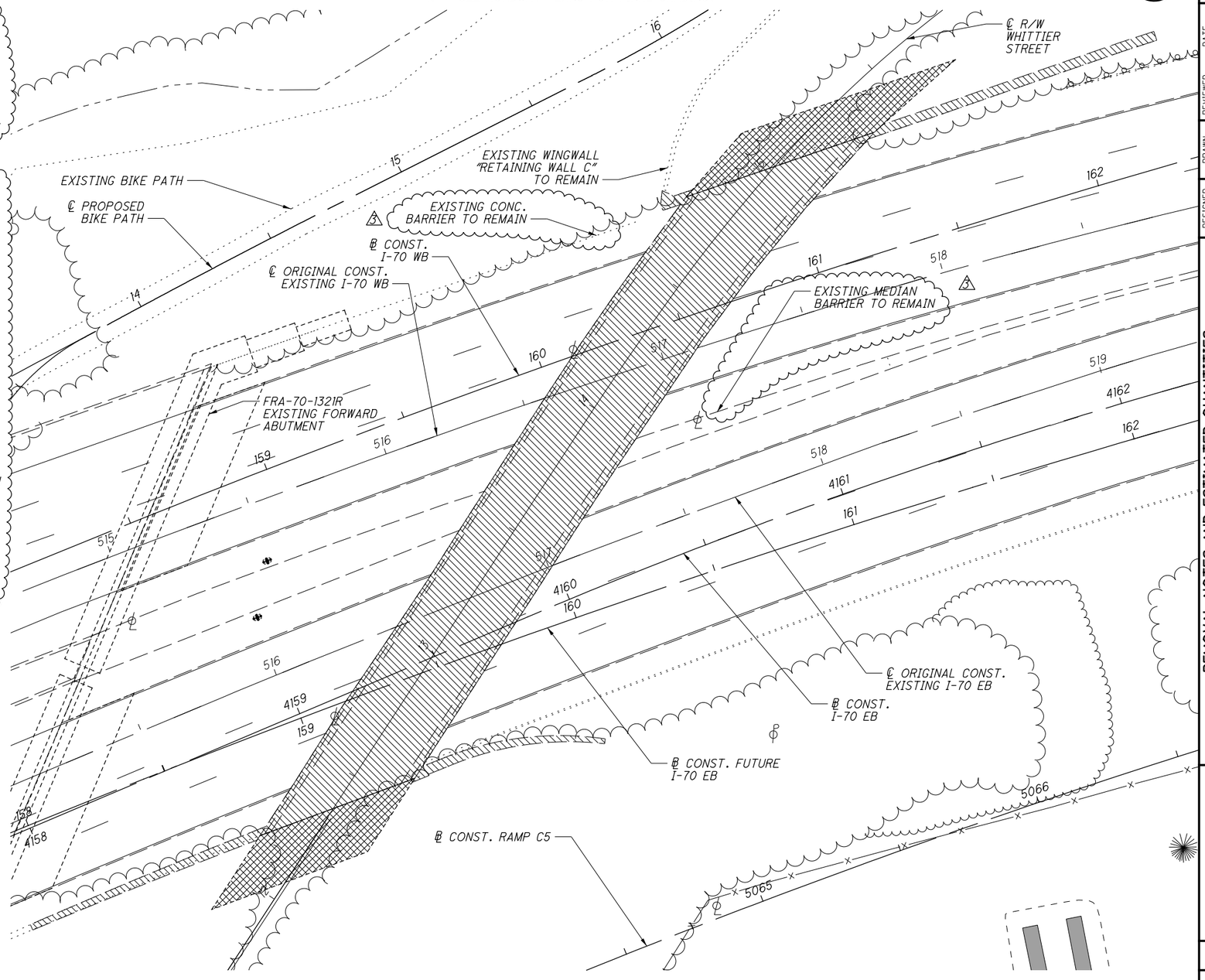
NOTES:

1. SEE ROADWAY PLANS FOR FINAL GRADING.

LEGEND:

PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

APPROACH SLAB REMOVED



PLAN

DESIGN AGENCY
GPD GROUP.
Cities, P.Vs, Schools, Rivers, & Districts, Inc.
520 Viaduct Drive, Suite 730, Columbus, Ohio 43215 614.210.0731
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DESIGNED	DRAWN	REVIEWED	DATE
MOJ	MOJ	TJW	9-6-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DGN		2504464	

REMOVAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. FRA-70-1343
WHITTIER STREET OVER I-70/77

FRA-70/71-12.68/14.86
PID No. 105523

1 / 1

1462A
1815

O:\2012\2012046\FRA\105523\STRUCTURES\FRA070_1343\SHEETS\070_1343SN001.DGN
11/24/2021
9:59:48 AM
ODOT61STD_USER

DESIGN STRESSES

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI
(CULVERT, WINGWALLS & FOOTINGS)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

FOUNDATION BEARING RESISTANCE

THE FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LOAD PRESSURE OF 5.0 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 8.7 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 19.6 KIPS PER SQUARE FOOT.

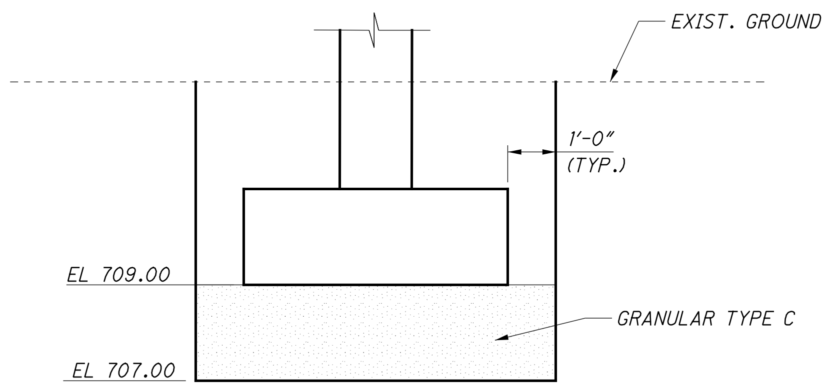
ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

ALL WORK SHALL BE AS PER ITEM 503, EXCEPT THE LIMITS OF EXCAVATION SHALL BE PER THE DETAILS ON THIS SHEET. BACKFILL TO THE BOTTOM OF FOOTING ELEVATION WITH GRANULAR MATERIAL TYPE C.

CALCULATED: RFV DATE: 2/27/19
CHECKED: DJC DATE: 2/28/19

ESTIMATED QUANTITIES

ITEM	EXT.	TOTAL	PARTICIPATION 02/NHS/BR (4)	UNIT	DESCRIPTION	SHEET REF.
203	35120	91	91	CY	GRANULAR MATERIAL, TYPE C	
503	21101	293	293	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	1
509	10000	65,042	65,042	LB	EPOXY COATED REINFORCING STEEL	
511	46012	52	52	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING	
511	46512	68	68	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	
511	47012	158	158	CY	CLASS QC1 CONCRETE WITH QC/QA, CULVERT	
512	10100	111	111	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	33000	270	270	SY	TYPE 2 WATERPROOFING	
516	13600	65	65	SF	1" PREFORMED EXPANSION JOINT FILLER	
518	21200	62	62	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
518	40000	60	60	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
518	40010	20	20	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	



FOOTING EXCAVATION DETAIL

ABBREVIATIONS

ABUT.	ABUTMENT	N.P.C.P.P.	NON-PERFORATED CORRUGATED PLASTIC PIPE
ADDIT.	ADDITIONAL	N.S.	NEAR SIDE
A.P.P.	AS PER PLAN	P.C.P.P.	PERFORATED CORRUGATED PLASTIC PIPE
BOT.	BOTTOM	P.E.J.F.	PREFORMED EXPANSION JOINT FILLER
BRG.	BEARING	R.A.	REAR ABUTMENT
B.S.	BOTH SIDES	SER.	SERIES
BTWN.	BETWEEN	SHT.	SHEET
CLR.	CLEAR	SPA.	SPACES OR SPACED
CONST. JT.	CONSTRUCTION JOINT	SPL.	SPLICE
DIA.	DIAMETER	SR	SERIES (REINFORCING STEEL LIST SHEETS)
DIM.	DIMENSION	STD.	STANDARD
D.N.D.	DO NOT DISTURB	T.B.R.	TO BE REMOVED
DWG.	DRAWING	TYP.	TYPICAL
EA.	EACH		
EQ.	EQUAL OR EQUALLY		
F.A.	FORWARD ABUTMENT		
FRWD.	FORWARD		
F.S.	FAR SIDE		
MIN.	MINIMUM		
NO.	NUMBER		

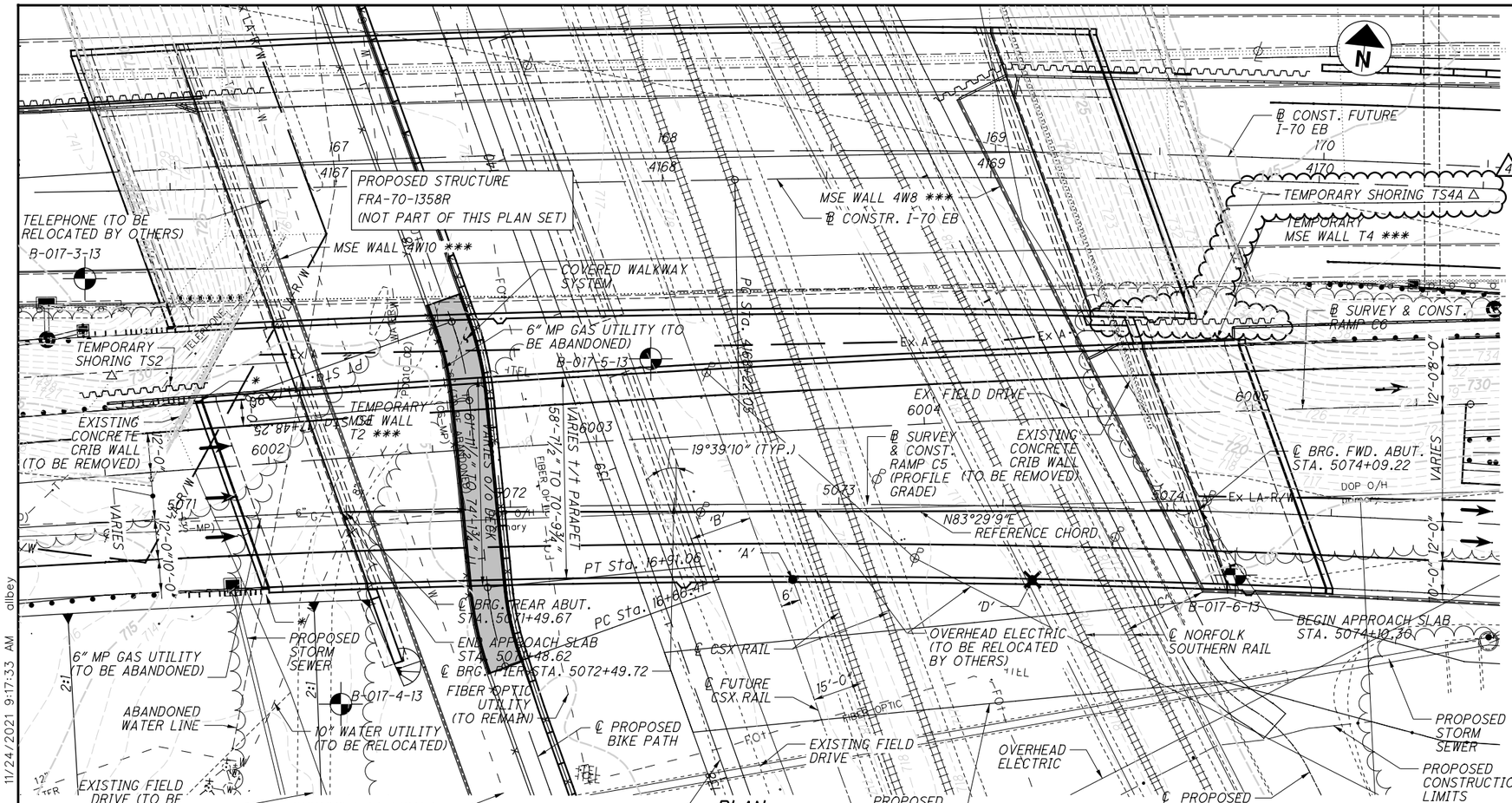
NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE	CWL	11-29-2021

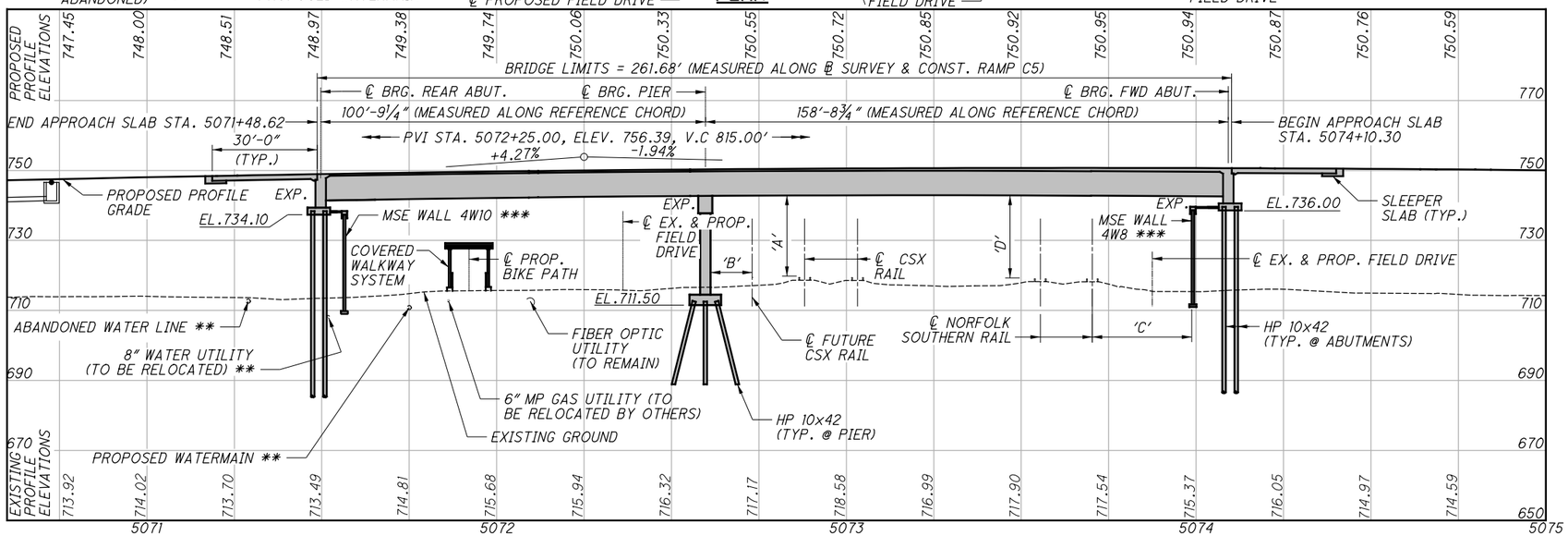
DESIGN AGENCY
GPD GROUP.

REVIEWED DGN DATE 9-6-19
STRUCTURE FILE NUMBER 2503749
DRAWN RPR REVISED
DESIGNED RHC CHECKED DJC

ESTIMATED QUANTITIES
BRIDGE NO. FRA-70-1357A
RAMP C5 OVER ELECTRICAL VAULT

FRA-70/71-12.68/14.86
PID No. 105523





PROFILE ALONG ℄ SURVEY & CONSTRUCTION RAMP C5

ESTIMATED PILE LENGTHS:
REAR ABUTMENT: 90'
PIER: 70'
FORWARD ABUTMENT: 100'

NUMBER	DESCRIPTION	REVISED BY	DATE
4	ADDED TEMPORARY SHORING TS4A	CAS	11-29-2021

3486-E

BENCHMARK DATA

CP4, CONCRETE MONUMENT WITH 2" ALUMINUM CAP "AZIMUTH MARK" APPROXIMATELY ON THE WEST SIDE OF THE CUL-DE-SAC AT THE WEST END OF W. MOUND ST. ELEVATION 714.392
NORTHING 712059.179 EASTING 1826322.295

FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY PLAN SHEET 17 OF 1815

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE.
ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:
2015 ADT = 31,130 2015 ADTT = 3,269
2035 ADT = 32,510 2035 ADTT = 3,414
DIRECTIONAL DISTRIBUTION = 100%

HORIZONTAL CURVE DATA

RAMP C5	RAMP C6
P.I. = STA. 5073+05.04	P.I. = STA. 6002+94.69
△ = 9°08'00.15" RT	△ = 4°25'05.22" RT
Dc = 1°30'00"	Dc = 0°45'00"
R = 3,819.72'	R = 7,639.44'
T = 305.09'	T = 294.69'
L = 608.89'	L = 589.02'
E = 12.16'	E = 5.68'

LEGEND

ABUT. = ABUTMENT CONST. = CONSTRUCTION
BRG. = BEARING EXP. = EXPANSION
CONC. = CONCRETE FWD. = FORWARD

= PROJECT BORING LOCATION

* = MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 - FIRST POST
STATION 5071+06.91 (REAR LEFT)
STATION 5071+24.53 (REAR RIGHT)
(SEE ROADWAY PLANS FOR DETAILS AND PAYMENT)

** = REFER TO UTILITY PLANS FOR ADDITIONAL INFORMATION.

● POINT/DIMENSION "A" = 24'-4" ACTUAL MINIMUM VERTICAL CLEARANCE (LOW STEEL TO TOP OF RAIL) (23'-0" MINIMUM REQUIRED) (CSX)

DIMENSION 'B' = 18'-11¼" ACTUAL MINIMUM HORIZONTAL CLEARANCE (18'-0" MINIMUM REQUIRED) (CSX)

DIMENSION 'C' = 25'-4⅞" ACTUAL MINIMUM HORIZONTAL CLEARANCE (18'-0" MINIMUM REQUIRED) (NORFOLK SOUTHERN)

✖ POINT/DIMENSION "D" = 25'-4" ACTUAL MINIMUM VERTICAL CLEARANCE (LOW STEEL TO TOP OF RAIL) (23'-0" MIN. REQ.) (NORFOLK SOUTHERN)

*** = SEE MSE WALL PLANS FOR DETAILS AND PAYMENT

△ = SEE TEMPORARY SHORING PLANS FOR DETAILS AND PAYMENT

BORING LOCATIONS

BORING	STATION	OFFSET	APPROX.TOP OF BEDROCK ELEV.
B-017-3-13	5070+74.38	74.56' LT	656.8
B-017-4-13	5071+46.22	58.40' RT	659.3
B-017-5-13	5072+43.22	44.50' LT	650.0
B-017-6-13	5071+21.50	19.10' RT	650.6
B-017-7-13	5075+20.51	85.33' LT	653.1

PROPOSED STRUCTURE

TYPE: 2-SPAN CONTINUOUS STRAIGHT WELDED STEEL PLATE GIRDER WITH COMPOSITE REINFORCED CONCRETE DECK, SEMI-INTEGRAL PILE SUPPORTED STUB ABUTMENTS BEHIND MSE WALLS AND A REINFORCED CONCRETE WALL-TYPE PIER
SPANS: 100'-9¼", 158'-8¾" c/c BRGS. ALONG REFERENCE CHORD
ROADWAY: VARIES TOE/TOE PARAPET
LOADING: HL-93 AND 60 PSF FUTURE WEARING SURFACE
SKEW: 19°39'10" RIGHT FORWARD (MEASURED FROM REFERENCE CHORD)
APPROACH SLABS: 30'-0" LONG (AS-1-15 MODIFIED) WITH SLEEPER SLAB (AS-2-15)
ALIGNMENT: 1°30'00" CURVE TO THE RIGHT
SUPERELEVATION: 0.024 FT/FT
WEARING SURFACE: 1" MONOLITHIC CONCRETE
COORDINATES: LATITUDE 39°57'10.30" N
LONGITUDE 83°00'27.82" W

BURGESS & NIPLE
Engineers ■ Architects ■ Planners
5085 REED ROAD, COLUMBUS, OHIO 43220

DESIGNED MAK | DRAWN MAK | REVIEWED CAS | DATE 10/18/18
CHECKED JHL | REVISED | STRUCTURE FILE NUMBER 2510017

FRANKLIN COUNTY
STA. 5071+48.62
STA. 5074+10.30

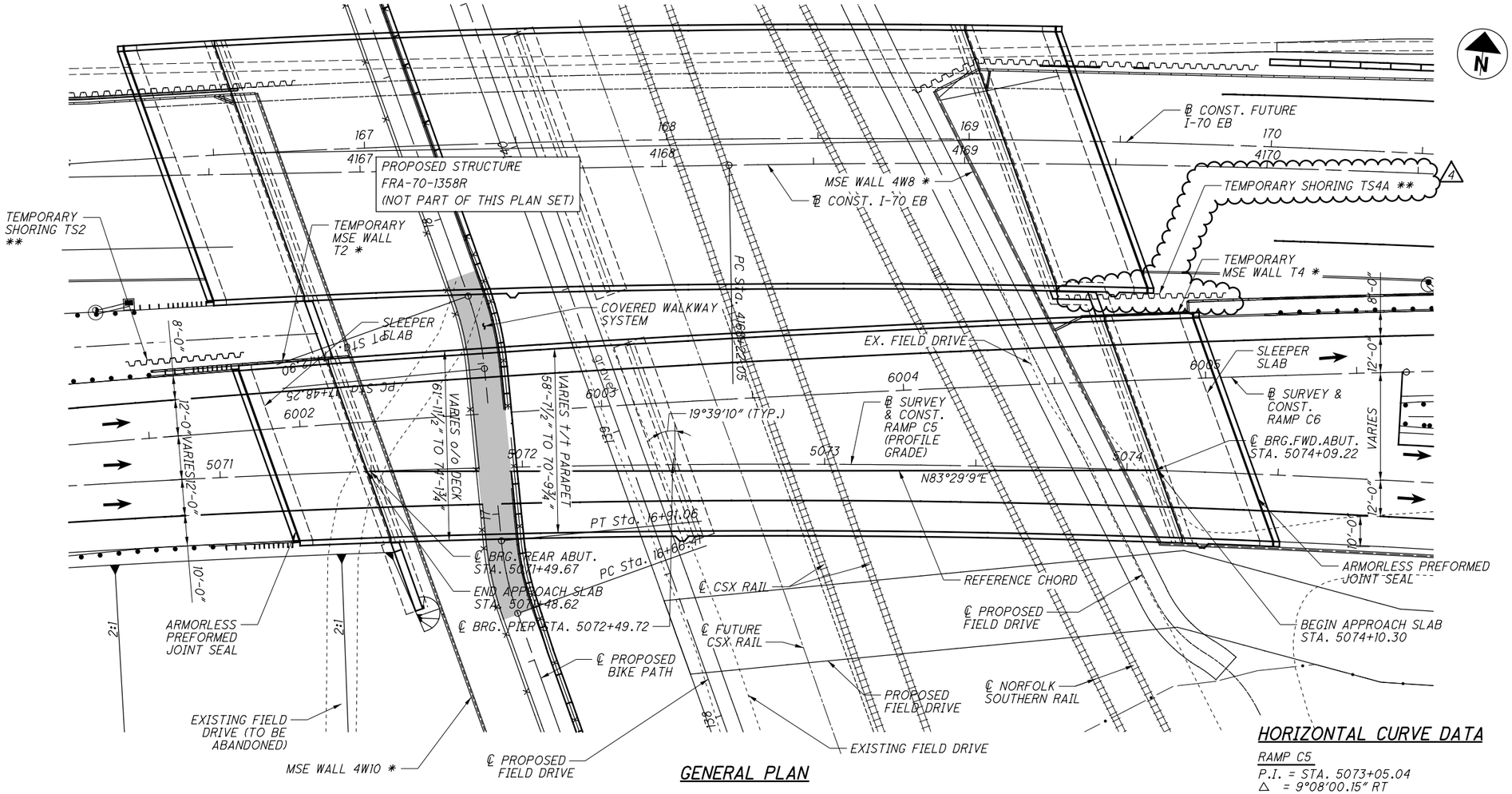
SITE PLAN
BRIDGE NO. FRA-70-1358A
RAMP C5 OVER CSX AND NS RAILROAD

FRA-70/71-12.68/14.86 (PROJ. 4R)
PID No. 105523

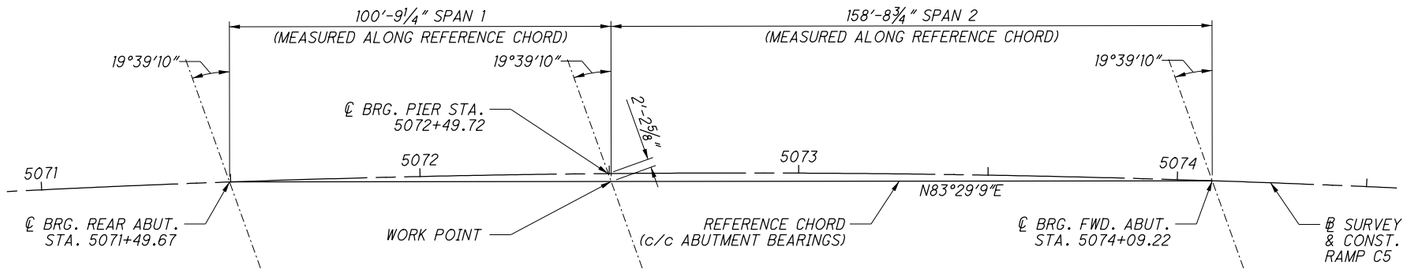
1 / 36

1472
1815

P:\PR5178\fro\77372\structures\FRA070_1358A\Stage 2\Sheets\070_1358ASP001.dgn 11/24/2021 9:17:33 AM allbey



GENERAL PLAN



LAYOUT DIAGRAM

NUMBER	DESCRIPTION	REVISED BY	DATE
4	ADDED TEMPORARY SHORING TS4A	CAS	11-29-2021

HORIZONTAL CURVE DATA

RAMP C5
P.I. = STA. 5073+05.04
△ = 9°08'00.15" RT
Dc = 1°30'00"
R = 3,819.72'
T = 305.09'
L = 608.89'
E = 12.16'

RAMP C6
P.I. = STA. 6002+94.69
△ = 4°25'05.22" RT
Dc = 0°45'00"
R = 7,639.44'
T = 294.69'
L = 589.02'
E = 5.68'

LEGEND

ABUT. = ABUTMENT
BRG. = BEARING
CONST. = CONSTRUCTION
FWD. = FORWARD

* = SEE MSE WALL PLANS FOR DETAILS AND PAYMENT
** = SEE TEMPORARY SHORING PLANS FOR DETAILS AND PAYMENT

3486-E

BURGESS & NIPLE
Engineers ■ Architects ■ Planners
5085 REED ROAD, COLUMBUS, OHIO 43220

DESIGNED JMK | DRAWN AAA | REVIEWED CAS | DATE 10/18/18
CHECKED MAK | REVISED | STRUCTURE FILE NUMBER 2510017

GENERAL PLAN
BRIDGE NO. FRA-70-1358A
RAMP C5 OVER CSX AND NS RAILROAD

FRA-70/71-12.68/14.86 (PROJ. 4R)
PID No. 105523

2 / 36

1473
1815

ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	PARTICIPATION 02/NHS/BR	UNIT	DESCRIPTION	ABUTS.	CALC'D MAK PIERS	DATE 12/10/2014 SUPER	CHK'D JHL GENERAL	DATE 12/12/2014 SHEET REF.
202	11201	LS	LS 4		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN					3 / 36
503	21100	132	132	CY	UNCLASSIFIED EXCAVATION		132			
505	11100	LS	LS		PILE DRIVING EQUIPMENT MOBILIZATION					
507	00100	5,795	5,795	FT	STEEL PILES HP10X42, FURNISHED	3,695	2,100			
507	00150	5,470	5,470	FT	STEEL PILES HP10X42, DRIVEN	3,510	1,960			
507	93300	65	65	EACH	STEEL POINTS OR SHOES	37	28			
509	10001	220,342	220,342	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	20,594	22,644	177,104		3 / 36
511	21523	676	676	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN			676		3 / 36
511	33500	2	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2				
511	34450	79	79	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			79		
511	40512	214	214	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		214			
511	44112	86	86	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	86				
511	46512	206	206	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	125	81			
512	10100	1,353	1,353	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	258	432	558	105	
513	10280	598,100	598,100	LB	STRUCTURAL STEEL MEMBERS, LEVEL 4			598,100		
513	20000	4,386	4,386	EACH	WELDED STUD SHEAR CONNECTORS			4,386		
516	10010	141	141	FT	ARMORLESS PREFORMED JOINT SEAL				141	
516	13900	34	34	SF	2" PREFORMED EXPANSION JOINT FILLER			34		
516	14020	170	170	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	170				
516	44201	7	7	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (BEARING: 25"x21"x3 7/8")		7			29 / 36
516	44201	7	7	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (BEARING: 15"x12"x3 3/4")	7				29 / 36
516	44201	7	7	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (BEARING: 18"x16"x3 3/4")	7				29 / 36
518	21200	127	127	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	127				
518	40000	170	170	FT	6" PERFORATED CORRUGATED PLASTIC PIPE				170	
526	30011	453	453	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN				453	3 ,30-32/36
526	90030	140	140	FT	TYPE C INSTALLATION				140	
SPECIAL	6074000	519	519	FT	VANDAL PROTECTION FENCE: 6 FT STRAIGHT, COATED FABRIC				519	26 & 27/36
SPECIAL	69098100	114	114	FT	COVERED WALKWAY SYSTEM				114	3 / 36

NUMBER	DESCRIPTION	REVISED BY	DATE
4	FUNDING PARTICIPATION CHANGE	CAS	11-29-2021

3486-E

BURGESS & NIPLE
Engineers ■ Architects ■ Planners
5085 REED ROAD, COLUMBUS, OHIO 43220

DESIGNED MAK | DRAWN AAA | REVIEWED CAS | DATE 10/18/18
CHECKED BES | REVISED | STRUCTURE FILE NUMBER 25100I7

ESTIMATED QUANTITIES
BRIDGE NO. FRA-70-1358A
RAMP C5 OVER CSX AND NS RAILROAD

FRA-70/71-12.68/14.86 (PROJ. 4R)
PID No. 105523

1476
1815

ESTIMATED QUANTITIES

ITEM	ITEM EXT.	UNIT	DESCRIPTION	ABUTMENTS	SUPERSTR.	GENERAL	TOTAL	PARTICIPATION		SHT. REF.
							CALC. JHL	DATE 6/2/2015	CHK'D JDH	DATE 6/2/2015
								4		4
								03/NHS/BR	03/NHS/BR	
202	11203		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	LS	LS	3 & 4/31
202	22900	SY	APPROACH SLAB REMOVED			323	323	194	129	
202	23500	SY	WEARING COURSE REMOVED		619	367	986	592	394	
505	11100		PILE DRIVING EQUIPMENT MOBILIZATION				LS	LS	LS	
507	00100	FT	STEEL PILES HP10X42, FURNISHED	4,390			4,390	2,634	1,756	
507	00150	FT	STEEL PILES HP10X42, DRIVEN	4,165			4,165	2,499	1,666	
507	92201	FT	PREBORED HOLES, AS PER PLAN	92			92	55	37	3/31
507	93300	EACH	STEEL POINTS OR SHOES	45			45	27	18	
509	10001	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	32,020	93,877		125,897	75,538	50,359	3/31
511	21523	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN		501		501	300	201	3/31
511	33500	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2			2	1	1	
511	34450	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)		29		29	17	12	
511	44112	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	192			192	115	77	
511	46512	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	158			158	95	63	
512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	343	405	105	853	512	341	
512	33000	SY	TYPE 2 WATERPROOFING	3	8		11	7	4	
515	15030	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (60 IN.)		9		9			
			(91'-10" BEAM LENGTH)					5	4	
515	20001	EACH	INTERMEDIATE DIAPHRAGMS, AS PER PLAN		24		24	14	10	16/31
516	10010	FT	ARMORLESS PREFORMED JOINT SEAL			204	204	122	82	
516	13900	SF	2" PREFORMED EXPANSION JOINT FILLER		167		167	100	67	
516	14020	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	234			234	140	94	
516	44201	EACH	ELASTOMERIC BEARING WITH INTERNAL STEEL LAMINATES AND LOAD PLATE (NEOPRENE),		18		18	11	7	26/31
			AS PER PLAN (BEARING: 1'-6" x 1'-4" x 3 1/8". LOAD PLATE: 1'-7" x 1'-5" x 2")							
518	21200	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	164			164	98	66	
518	40000	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	192			192	115	77	
526	30011	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN			655	655	393	262	4/31
526	90030	FT	TYPE C INSTALLATION			204	204	122	82	

GENERAL NOTES (CONTINUED):

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN:
THE REQUIREMENTS OF 511.03 AND 511.04 SHALL APPLY TO THIS ITEM OF WORK. THIS ITEM SHALL INCLUDE, BUT IS NOT LIMITED TO THE CONCRETE, REINFORCING STEEL, PEJF, GFRP BARS, AND HMWM SEALER NECESSARY TO FORM AND PLACE THE APPROACH SLABS AND CONCRETE PARAPETS ON THE APPROACH SLABS, AS SHOWN IN THE PLANS. PAYMENT FOR THIS ITEM SHALL ALSO INCLUDE THE ITEMS LISTED ON STANDARD DRAWING AS-1-15 AND ALL OTHER NECESSARY MATERIALS, LABOR, AND EQUIPMENT AND SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 526 REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN.

DECK PLACEMENT DESIGN ASSUMPTIONS:
THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.51 KIPS.
A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103 INCHES.
A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 INCHES.
A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65 INCHES.

ASBESTOS SURVEY:
AN ASBESTOS SURVEY FOR THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION WORK WAS CONDUCTED BY A LICENSED ASBESTOS HAZARD EVALUATION SPECIALIST. THE ASBESTOS INSPECTION REPORT DID NOT IDENTIFY THE PRESENCE OF ANY ASBESTOS CONTAINING MATERIALS ABOVE REGULATORY LIMITS. A COPY OF THE ASBESTOS INSPECTION REPORT FOR THE STRUCTURE IS INCLUDED IN THE PLAN PACKAGE FOR THIS PROJECT.

ELECTRONIC SUBMISSION:
SUBMIT A COMPLETED ELECTRONIC NOTIFICATION OF DEMOLITION AND RENOVATION FORM (NDRF), APPLICABLE FEES, AND THE ASBESTOS INSPECTION REPORT TO THE OEPA AT LEAST 10 DAYS PRIOR TO ANY DEMOLITION ACTIVITY, RENOVATION ACTIVITY, OR BOTH. SUBMIT THE NDRF AND PAYMENT ALONG WITH THE ASBESTOS INSPECTION REPORT USING THE OEPA EBUSINESS CENTER. SUBMIT ONE ELECTRONIC PDF COPY AND ONE HARD COPY OF THE NDRF TO THE ENGINEER. THE ENGINEER WILL PROVIDE ONE COPY TO THE DISTRICT ENVIRONMENTAL STAFF.

HARD COPY SUBMISSION:
THE CONTRACTOR MAY SUBMIT A HARD COPY OF THE COMPLETED NDRF AND PAYMENT ALONG WITH THE ASBESTOS INSPECTION REPORT. FOLLOW THE MAILING INSTRUCTIONS ON THE NDRF. CHECK WITH LOCAL HEALTH DEPARTMENT, COLUMBUS PUBLIC HEALTH, 240 PARSONS AVE., COLUMBUS, OHIO 43215, (614) 645-7005, TO DETERMINE IF THEY REQUIRE A HARD COPY SUBMITTAL.

SUBMIT THE COMPLETED NDRF TO OEPA AT LEAST 10 DAYS PRIOR TO DEMOLITION ACTIVITY, RENOVATION ACTIVITY, OR BOTH. RETAIN TWO HARD COPIES OF THE NDRF AND SUBMIT ONE COPY TO THE ENGINEER AND EMAIL ONE COPY TO THE ODOT DISTRICT ENVIRONMENTAL COORDINATOR AT: janice.gartner@dot.ohio.gov.

4 BASIS OF PAYMENT:
THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIALS NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

STANDARD ABBREVIATIONS:

ABUT. = ABUTMENT
BOT. = BOTTOM
BRG. = BEARINGS
c/c = CENTER-TO-CENTER
CIP = CAST-IN-PLACE
C.J. = CONSTRUCTION JOINT
CLR. = CLEAR
CMS = CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONST. = CONSTRUCTION
C.P.P. = CORRUGATED PLASTIC PIPE
DIA. = DIAMETER
DIM. = DIMENSION
DWG. = DRAWING
E.F. = EACH FACE
EB = EASTBOUND
EL. = ELEVATION
EQ. = EQUAL
EXP. = EXPANSION
F.A. = FORWARD ABUTMENT
F.F. = FAR FACE
FWD. = FORWARD
GFRP = GLASS FIBER REINFORCED POLYMER
HMWM = HIGH MOLECULAR WEIGHT METHACRYLATE
LT. = LEFT
M.C. = MECHANICAL CONNECTOR
MAX. = MAXIMUM
MGS = MIDWEST GUARDRAIL SYSTEM
MID. = MIDDLE
MIN. = MINIMUM
MSE = MECHANICALLY STABILIZED EARTH
N.F. = NEAR FACE
o/o = OUT-TO-OUT
PEJF = PREFORMED EXPANSION JOINT FILLER
R.A. = REAR ABUTMENT
RT. = RIGHT
S.O. = SERIES OF
SPA. = SPACES
STA. = STATION
STD. = STANDARD
T&B = TOP & BOTTOM
t/t = TOE-TO-TOE
TYP. = TYPICAL
U.N.O. = UNLESS NOTED OTHERWISE

NUMBER	DESCRIPTION	REVISED BY	DATE
4	- FUNDING PARTICIPATION CHANGE - ADDED ASBESTOS NOTE	CAS	11-29-2021

3486-E

BURGESS & NIPLE
Engineers ■ Architects ■ Planners
5085 REED ROAD, COLUMBUS, OHIO 43220

DESIGNED TTK | DRAWN AAA | REVIEWED CAS | DATE 10/18/18
CHECKED JHL | REVISED | STRUCTURE FILE NUMBER 2510020

GENERAL NOTES AND ESTIMATED QUANTITIES
FRA-70-1373R
I-70 EB OVER SHORT STREET

FRA-70/71-12.68/14.86 (PROJ. 4R)
PID No. 105523

4 / 31

1511
1815

ESTIMATED QUANTITIES

ITEM	ITEM EXT.	UNIT	DESCRIPTION	ABUTMENTS	SUPERSTR.	CALC'D ABP GENERAL	DATE 7/27/2015 TOTAL	CHK'D JDH PARTICIPATION 02/NHS/BR	DATE 7/30/2015 SHT. REF.
505	11100		PILE DRIVING EQUIPMENT MOBILIZATION				LS	LS 4	
507	00100	FT	STEEL PILES HP10X42, FURNISHED	2,155			2,155	2,155	
507	00150	FT	STEEL PILES HP10X42, DRIVEN	2,050			2,050	2,050	
507	93300	EACH	STEEL POINTS OR SHOES	21			21	21	
509	10001	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	12,564	42,810		55,374	55,374	3 / 25
511	21523	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN		212		212	212	3 / 25
511	33500	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2			2	2	
511	34450	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)		29		29	29	
511	44112	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	66			66	66	
511	46512	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	70			70	70	
512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	124	404		528	528	
515	15030	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (60 IN.)		4		4	4	
			(91'-2" BEAM LENGTH)						
515	20001	EACH	INTERMEDIATE DIAPHRAGMS, AS PER PLAN		9		9	9	11 / 25
516	10010	FT	ARMORLESS PREFORMED JOINT SEAL			85	85	85	
516	13900	SF	2" PREFORMED EXPANSION JOINT FILLER		167		167	167	
516	14020	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	124			124	124	
516	44201	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE),		8		8	8	21 / 25
			AS PER PLAN (BEARING: 1'-6" x 1'-4" x 3 1/8", LOAD PLATE: 1'-7" x 1'-5" x 2")						
518	21200	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	63			63	63	
518	40000	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	88			88	88	
526	30011	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN			276	276	276	3 / 25
526	90030	FT	TYPE C INSTALLATION			85	85	85	

STANDARD ABBREVIATIONS:

ABUT. = ABUTMENT
BOT. = BOTTOM
BRG. = BEARINGS
c/c = CENTER-TO-CENTER
CIP = CAST-IN-PLACE
C.J. = CONSTRUCTION JOINT
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CMS = CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONST. = CONSTRUCTION
C.P.P. = CORRUGATED PLASTIC PIPE
DIA. = DIAMETER
DIM. = DIMENSION
DWG. = DRAWING
E.F. = EACH FACE
EB = EASTBOUND
EL. = ELEVATION
EQ. = EQUAL
EXP. = EXPANSION
F.A. = FORWARD ABUTMENT
F.F. = FAR FACE
FWD. = FORWARD
GFRP = GLASS FIBER REINFORCED POLYMER
LT. = LEFT
MAX. = MAXIMUM
MID. = MIDDLE
MIN. = MINIMUM
MSE = MECHANICALLY STABILIZED EARTH
N.F. = NEAR FACE
o/o = OUT-TO-OUT
PEJF = PREFORMED EXPANSION JOINT FILLER
R.A. = REAR ABUTMENT
RT. = RIGHT
S.O. = SERIES OF
SPA. = SPACES
STA. = STATION
STD. = STANDARD
T&B = TOP & BOTTOM
†/† = TOE-TO-TOE
TYP. = TYPICAL
U.N.O. = UNLESS NOTED OTHERWISE
V.C. = VERTICAL CURVE

NUMBER	DESCRIPTION	REVISED BY	DATE
4	FUNDING PARTICIPATION CHANGE	CAS	11-29-2021

3486-E

BURGESS & NIPLE
Engineers ■ Architects ■ Planners
5085 REED ROAD, COLUMBUS, OHIO 43220

DESIGNED JHL | DRAWN JHL | REVIEWED CAS DATE 10/18/18 | CHECKED TTK | REVISED | STRUCTURE FILE NUMBER 2510019

ESTIMATED QUANTITIES
FRA-70-1373A
RAMP C5 OVER SHORT STREET

FRA-70/71-12.68/14.86 (PROJ. 4R)
PID No. 105523

4 / 25

1542
1815

ESTIMATED QUANTITIES

CALCULATED: RFV DATE: 4/6/2018
CHECKED: MLS DATE: 5/23/2019

ITEM	EXT.	TOTAL	PARTICIPATION 02/NHS/BR	UNITS	DESCRIPTION	ABUT.	PIER	SUPER.	GENERAL	A.P.P. REFERENCE SHEET NO.
503	11101	LS	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN					1569
503	21100	7,708	7,708	CY	UNCLASSIFIED EXCAVATION	5,878	1,830			
509	10001	1,508,568	1,508,568	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	571,149	388,043	474,768	74,608	1569
511	33418	871	871	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE	469	402			
511	33500	7	7	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	7				
511	34446	1,097	1,097	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			1,097		
511	34450	139	139	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			139		
511	41012	1,238	1,238	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTING		1,238			
511	44112	2,713	2,713	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	2,713				
511	46512	1,922	1,922	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	1,567	355			
512	10100	7,010	7,010	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), LIGHT NEUTRAL	3,231	2,889	890		
512	10100	8,863	8,863	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), BLACK			8,863		
512	33000	22	22	SY	TYPE 2 WATERPROOFING	22				
513	10200	3,250	3,250	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF	3,250				
4 513	10220	135,978	135,978	LB	STRUCTURAL STEEL MEMBERS, LEVEL 1	135,978				
515	15110	45	45	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, WF60-49			45		
					(BEAM LENGTH VARIES 93'-1 1/2" TO 99'-2 3/8")					
515	20000	129	129	EACH	INTERMEDIATE DIAPHRAGMS			129		
516	11211	254	254	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN (4")			254		1661
516	13600	2,057	2,057	SF	1" PREFORMED EXPANSION JOINT FILLER	304	1,823			
516	13900	1,040	1,040	SF	2" PREFORMED EXPANSION JOINT FILLER	674	366			
516	14020	23	23	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	23				
516	44101	90	90	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-1" x 1'-11" x 2.70"), AS PER PLAN	45	45			1628
518	12000	4	4	EACH	SCUPPERS, INCLUDING SUPPORTS			4		
518	21200	922	922	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	922				
518	40000	835	835	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	835				
518	40010	44	44	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	44				
518	51100	35	35	FT	8" PIPE DOWNSPOUT, INCLUDING SPECIALS				35	
518	60030	272	272	FT	PIPE HORIZONTAL CONDUCTOR				272	
524	95442	234	234	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK WITH QC/QA	234				
524	95452	1,686	1,686	FT	DRILLED SHAFTS, 48" DIAMETER, ABOVE BEDROCK WITH QC/QA		1,686			
524	95472	3,751	3,751	FT	DRILLED SHAFTS, 60" DIAMETER, ABOVE BEDROCK WITH QC/QA, AS PER PLAN	3,751				1569
526	30011	661	661	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN				661	1668
526	90010	47	47	FT	TYPE A INSTALLATION				47	
SPECIAL	53013000	6,060	6,060	SF	SPECIAL - FORM LINER	4,830		1,230		1569
SPECIAL	53000600	1,200	1,200	SF	STRUCTURES: PRECAST FACADE PANELS	1,200				1570

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE/ADDED ITEM	CWL/RFV	11-29-2021

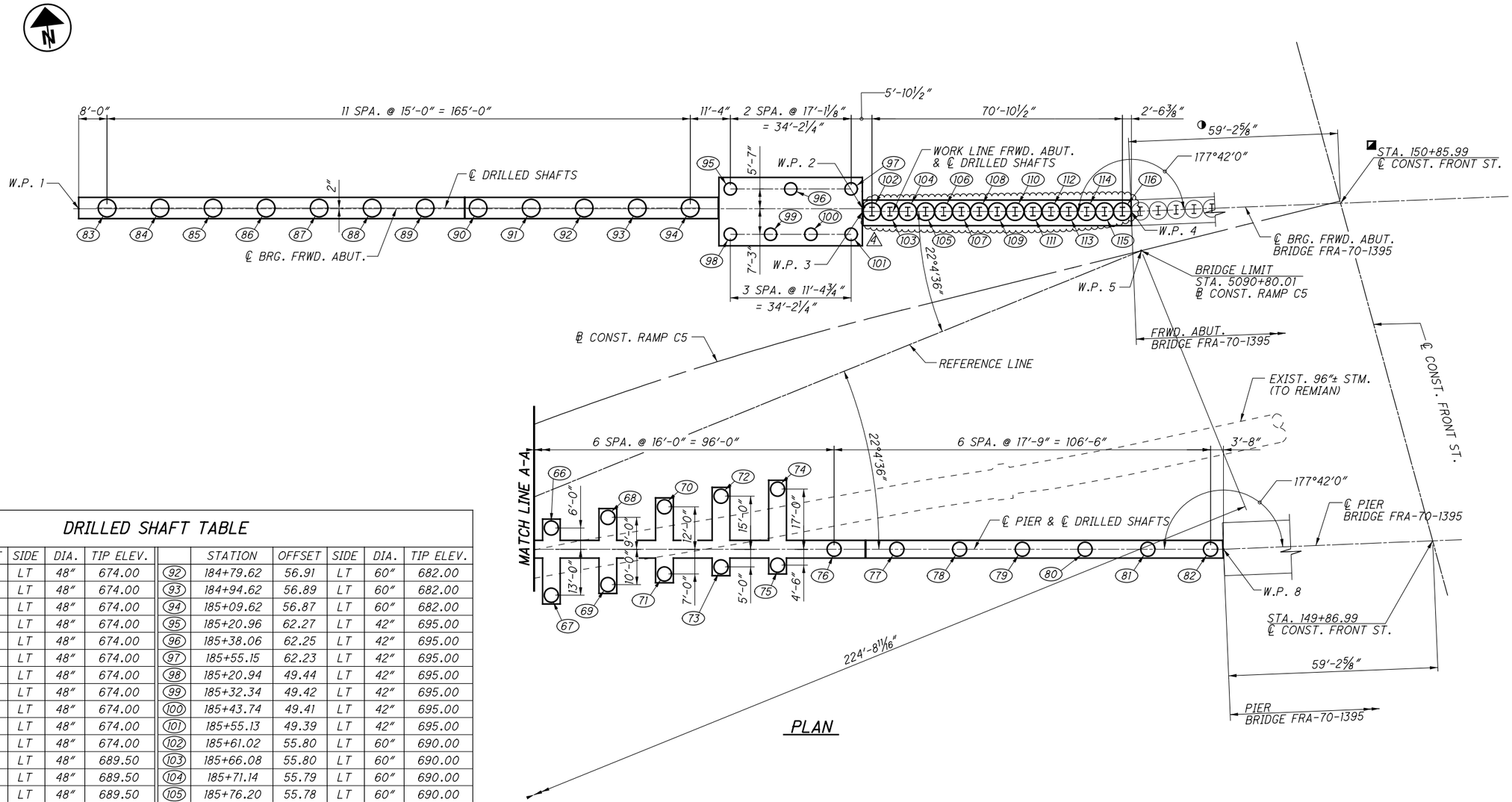
DESIGN AGENCY
GPD GROUP.
Gitts, Pyle, Schorer, Burns & Deverich, Inc.
8800 Lyra Drive, Suite 720, Columbus, Ohio 43240 614.410.0701

DESIGNED MLS | DRAWN MLS | REVIEWED DGN | DATE 9-6-19
CHECKED RHC | REVISED | STRUCTURE FILE NUMBER 2510021

ESTIMATED QUANTITIES
BRIDGE NO. FRA-70-1390C
RAMP C5 OVER I-70/71

FRA-70/71-12.68/14.86
PID No. 105523

1571
1815



PLAN

DRILLED SHAFT TABLE

	STATION	OFFSET	SIDE	DIA.	TIP ELEV.		STATION	OFFSET	SIDE	DIA.	TIP ELEV.
(66)	184+48.11	46.04	LT	48"	674.00	(92)	184+79.62	56.91	LT	60"	682.00
(67)	184+48.13	27.04	LT	48"	674.00	(93)	184+94.62	56.89	LT	60"	682.00
(68)	184+64.10	49.06	LT	48"	674.00	(94)	185+09.62	56.87	LT	60"	682.00
(69)	184+64.13	30.06	LT	48"	674.00	(95)	185+20.96	62.27	LT	42"	695.00
(70)	184+80.10	52.08	LT	48"	674.00	(96)	185+38.06	62.25	LT	42"	695.00
(71)	184+80.12	33.08	LT	48"	674.00	(97)	185+55.15	62.23	LT	42"	695.00
(72)	184+96.09	55.10	LT	48"	674.00	(98)	185+20.94	49.44	LT	42"	695.00
(73)	184+96.12	35.10	LT	48"	674.00	(99)	185+32.34	49.42	LT	42"	695.00
(74)	185+12.09	57.12	LT	48"	674.00	(100)	185+43.74	49.41	LT	42"	695.00
(75)	185+12.12	35.62	LT	48"	674.00	(101)	185+55.13	49.39	LT	42"	695.00
(76)	185+28.11	40.14	LT	48"	674.00	(102)	185+61.02	55.80	LT	60"	690.00
(77)	185+45.86	40.16	LT	48"	689.50	(103)	185+66.08	55.80	LT	60"	690.00
(78)	185+63.61	40.18	LT	48"	689.50	(104)	185+71.14	55.79	LT	60"	690.00
(79)	185+81.36	40.20	LT	48"	689.50	(105)	185+76.20	55.78	LT	60"	690.00
(80)	185+99.21	40.22	LT	48"	689.50	(106)	185+81.27	55.78	LT	60"	690.00
(81)	186+17.21	40.14	LT	48"	689.50	(107)	185+86.33	55.77	LT	60"	690.00
(82)	186+35.20	39.96	LT	48"	689.50	(108)	185+91.39	55.76	LT	60"	690.00
(83)	183+44.62	57.09	LT	60"	682.00	(109)	185+96.45	55.76	LT	60"	690.00
(84)	183+59.62	57.07	LT	60"	682.00	(110)	186+01.52	55.75	LT	60"	690.00
(85)	183+74.62	57.05	LT	60"	682.00	(111)	186+06.58	55.74	LT	60"	690.00
(86)	183+89.62	57.03	LT	60"	682.00	(112)	186+11.64	55.74	LT	60"	690.00
(87)	184+04.62	57.01	LT	60"	682.00	(113)	186+16.70	55.73	LT	60"	690.00
(88)	184+19.62	56.99	LT	60"	682.00	(114)	186+21.77	55.72	LT	60"	690.00
(89)	184+34.62	56.97	LT	60"	682.00	(115)	186+26.93	55.71	LT	60"	690.00
(90)	184+49.62	56.95	LT	60"	682.00	(116)	186+32.09	55.69	LT	60"	690.00
(91)	184+64.62	56.93	LT	60"	682.00						

NOTE: STATIONS AND OFFSETS FOR DRILLED SHAFT NOS. (1) TO (82) GIVEN TO ℄ CONST. FUTURE I-70 EB
STATIONS AND OFFSETS FOR DRILLED SHAFT NOS. (83) TO (116) GIVEN TO ℄ CONST. I-70 WB

LEGEND:

◑ INIDCATES MEASURED FROM W.P. 4 TO INTERSECTON OF ℄ CONST. FRONT ST. AND ℄ BRG. FRWD. ABUT. BRIDGE FRA-70-1395

◪ INDICATES STATION GIVEN AT INTERSECTON OF ℄ CONST. FRONT ST. AND ℄ BRG. FRWD. ABUT. BRIDGE FRA-70-1395

NOTES:

1. FOR MATCHLINE A-A, SEE SHT. NO. 14/118.
2. FOR GEOMETRY PLAN, SEE SHT. NO. 5/118.

NO.	DESCRIPTION	REV. BY	DATE
4	ADDED STEEL IN DRILLED SHAFTS	RFV	11-29-2021

DESIGN AGENCY
GPD GROUP.
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.

801 Yshlanti Drive, Suite 150, Columbus, Ohio 43213 614.2101733

DESIGNED	DRAWN	REVIEWED	DATE
DGN	RPR	RHC	9-6-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MOJ		2510021	

DRILLED SHAFT PLAN - 2
BRIDGE NO. FRA-70-1390C
RAMP C5 OVER I-70/71

FRA-70/71-12.68/14.86
PID No. 105523

15 / 118

1578
1815

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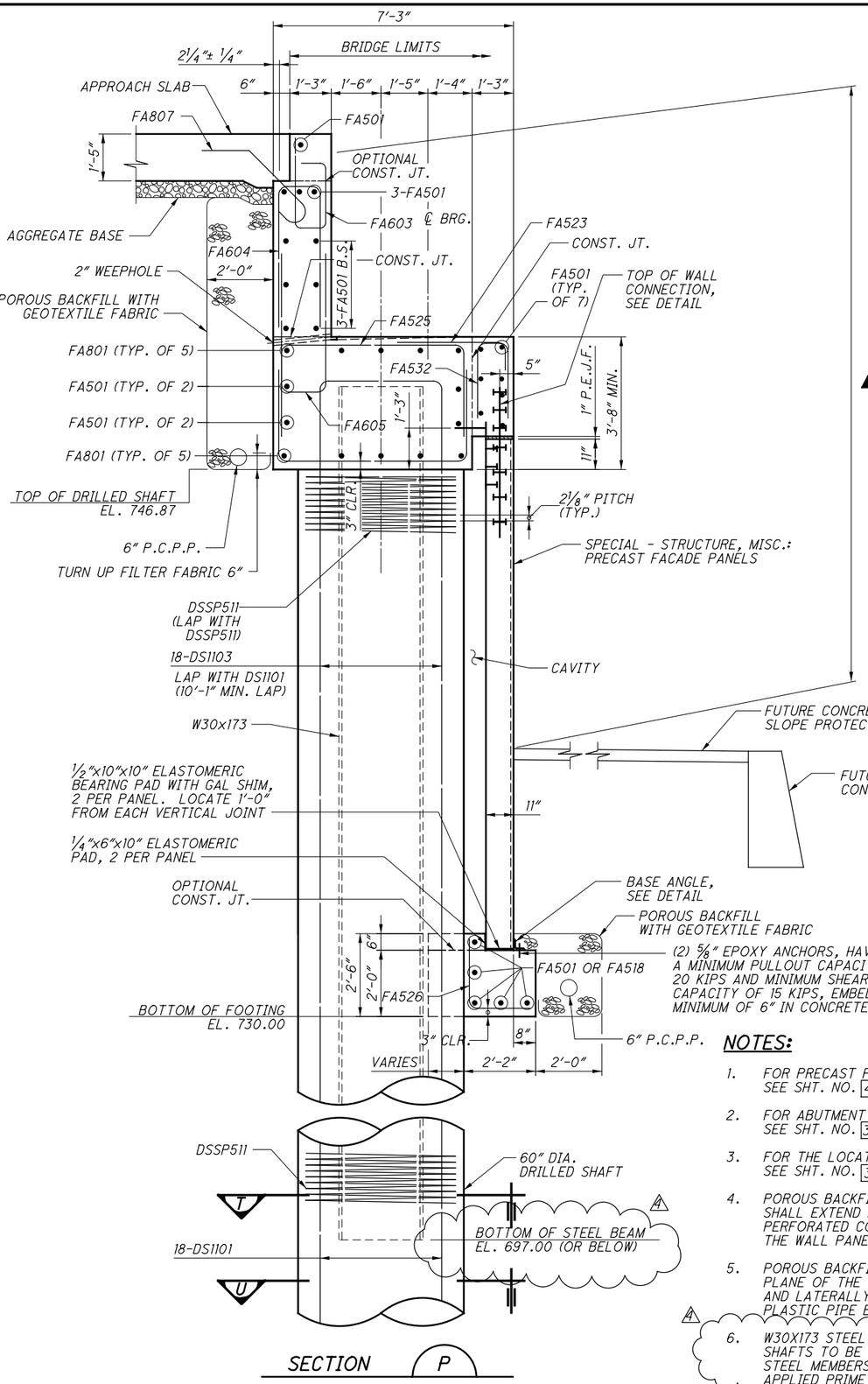
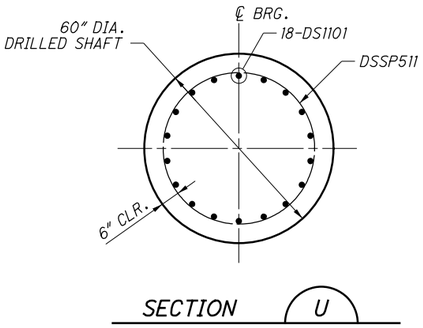
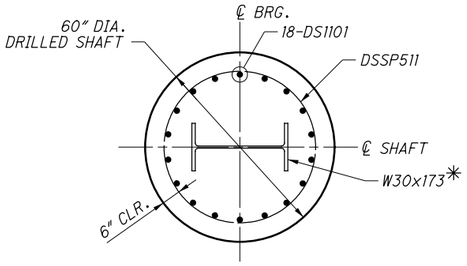


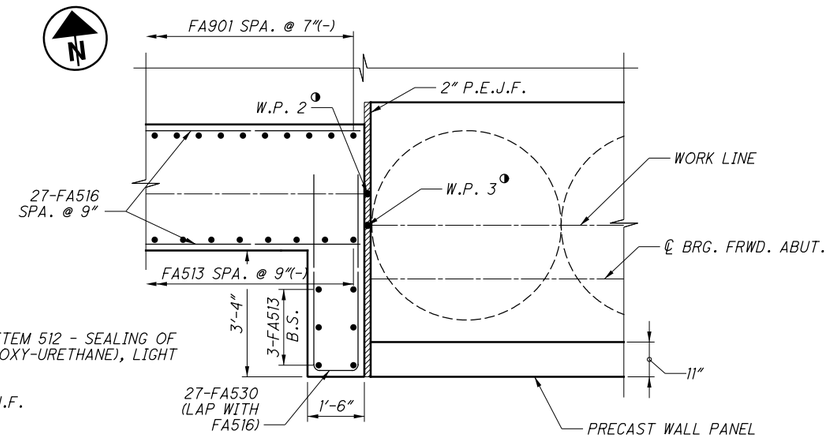


SECTION U



SECTION T

*EXTEND W30x173 SECTION TO AT LEAST EL. 697 (OR BELOW) AND PROJECT IT 2'-6" MIN. INTO THE BOTTOM OF THE ABUTMENT SHAFT CAP

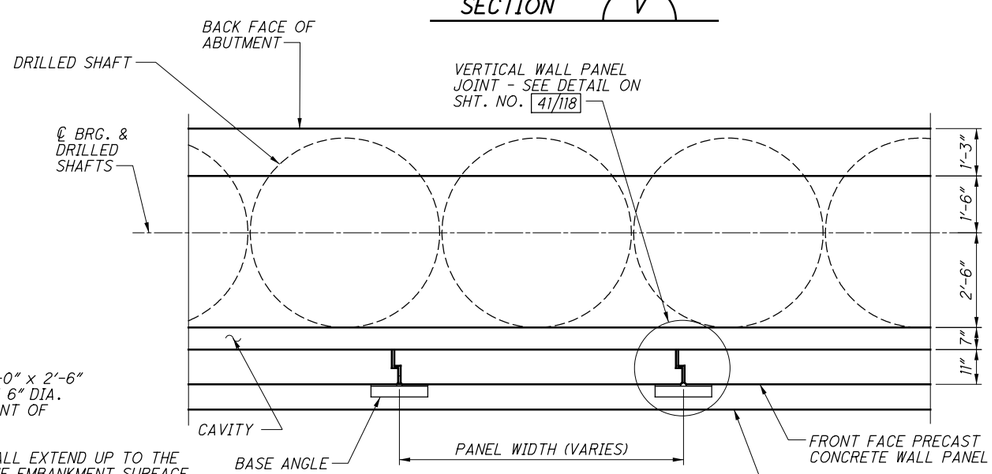


SECTION V

LEGEND:

▲ INDICATES LIMITS OF "ITEM 512 - SEALING OF CONCRETE SURFCES (EPOXY-URETHANE), LIGHT NEUTRAL"

◑ LOCATED AT ℄ 2" P.E.J.F.



TYPICAL DRILLED SHAFT AND FOOTING PLAN

NOTES:

1. FOR PRECAST FACADE PANELS DETAILS, SEE SHT. NO. 41/118 .
2. FOR ABUTMENT DRAINAGE DETAILS, SEE SHT. NO. 35/118 .
3. FOR THE LOCATION OF SECTION P, SEE SHT. NO. 38/118 .
4. POROUS BACKFILL WITH GEOTEXTILE FABRIC: 2'-0" x 2'-6" SHALL EXTEND LATERALLY TO THE ENDS OF THE 6" DIA. PERFORATED CORRUGATED PLASTIC PIPE IN FRONT OF THE WALL PANEL FOOTING. THE 6" DIA.
5. POROUS BACKFILL WITH GEOTEXTILE FABRIC SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE 6" DIA. PERFORATED CORRUGATED PLASTIC PIPE BEHIND THE ABUTMENT CAP ON TOP OF THE SHAFTS.

4 6. W30X173 STEEL SECTION EMBEDDED IN THE THE ABUTMENT DRILLED SHAFTS TO BE INCLUDED FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 1. THE STEEL SHALL BE COATED WITH A SHOP APPLIED PRIME COAT CONFORMING TO CMS 514.

NO.	DESCRIPTION	REV. BY	DATE
4	ADDITIONAL DETAIL & NOTE	RFV	11-29-2021

DESIGN AGENCY
GPD GROUP.
Cleto, Pyle, Scherer, Burns & DeFazio, Inc.
8800 Lyra Drive, Suite 350, Columbus, Ohio 43240 614.210.0753

DESIGNED RHC | DRAWN RPR | CHECKED MOJ | REVIEWED DGN | DATE 9-6-19 | REVISED | STRUCTURE FILE NUMBER 2510021

FORWARD ABUTMENT SECTIONS
BRIDGE NO. FRA-70-1390C
RAMP C5 OVER I-70/71

FRA-70/71-12.68/14.86
PID No. 105523

40 / 118

1603
1815

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ESTIMATED QUANTITIES

CALCULATED: RFV DATE: 9-3-19
CHECKED: DJC DATE: 9-6-19

ITEM	EXT.	TOTAL BRIDGE	TOTAL EAST CAP	PARTICIPATION 03/NHS/BR	PARTICIPATION 07/NHS/OT/AEP	UNITS	DESCRIPTION	ABUT BRIDGE	ABUT EAST CAP	PIER BRIDGE	PIER EAST CAP	SUPER BRIDGE	SUPER EAST CAP	GENERAL BRIDGE	GENERAL EAST CAP	A.P.P. REFERENCE SHT. NO.
202	11003	LS	LS	LS			STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN									8
202	22900	336		336		SY	APPROACH SLAB REMOVED							336		
202	23500	1271		1271		SY	WEARING COURSE REMOVED							1271		
503	11101	LS	LS	LS			COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN									8
503	21100	7806		7806		CY	UNCLASSIFIED EXCAVATION	6781		1025						
509	10000	2 584,714		584,714		LB	EPOXY COATED REINFORCING STEEL	48,657		110,481		312,908		112,668		
511	34446	644	217	861		CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK					644	217			
511	34451	39	41	80		CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN					39	41			1746A
511	41012	393		393		CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS			393						
511	44113	315	131	446		CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN	315	131							5
511	46513	290	18	308		CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING, AS PER PLAN	43	18	247						4
511	51513	130	134	264		CY	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK, AS PER PLAN					130	134			1746A
512	10050	714	547	1261		SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)					714	547			1746A
512	10100	1031	307	1338		SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	737	307	294						1746A
512	33000	7		7		SY	TYPE 2 WATERPROOFING	7								
4 513	10220	385,790	161,582	547,372		LB	STRUCTURAL STEEL MEMBERS, LEVEL 1	385,790	161,582							
513	10280	591,983	274,536	866,519		LB	STRUCTURAL STEEL MEMBERS, LEVEL 4					591,983	274,536			
513	20000	7920	4865	12785		EACH	WELDED STUD SHEAR CONNECTORS					7920	4865			
514	00060	30594	13784	44378		SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT					30594	13784			
514	00066	30594	13784	44378		SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT					30594	13784			
514	10000	22	10	32		EACH	FINAL INSPECTION REPAIR					22	10			
2 516	10011	178	53	231		FT	ARMORLESS PREFORMED JOINT SEAL, AS PER PLAN							178	53	58 - 59
516	11211	218	333	551		FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN (4")					218	333			44A
516	13600	397		397		SF	1" PREFORMED EXPANSION JOINT FILLER	397								
516	13900	84		84		SF	2" PREFORMED EXPANSION JOINT FILLER			84						
516	44101	20	10	30		EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) 10½" x 1'-4" x 2.45" PAD WITH 11½" x 1'-10" BEVELED PLATE, AS PER PAN					20	10			25
516	44201	10	5	15		EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) 1'-6" x 2'-0" x 3.40" PAD WITH 1'-7" x 2'-9" BEVELED PLATE, AS PER PLAN					10	5			25
518	12500	2		2		EA	SCUPPER, MISC.: NEENAH R-4014-TL SCUPPER & TYPE V GATE					2				33
518	21200	177	69	246		CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	177	69							
518	40000	445	175	620		FT	6" PERFORATED CORRUGATED PLASTIC PIPE	445	175							
518	40010	25	25	50		FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	25	25							
518	62100	110		110		FT	STRUCTURE DRAINAGE, MISC.: DOWNSPOUT/REDUCER/ELBOW CONDUIT DRAINAGE COLLECTION SYSTEM					110				33
4 524	95472	2,423	1,015	3,438		FT	DRILLED SHAFTS, 60" DIAMETER, ABOVE BEDROCK WITH QC/QA, AS PER PLAN	2,423	1,015							4
526	25011	700	258	958		SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN							700	258	58 - 60
2 526	90031	178	53	231		FT	TYPE C INSTALLATION, AS PER PLAN							178	53	58 - 59
SPECIAL	53000200	LS		LS			STRUCTURES: PERMANENT UTILITY SUPPORTS (TRAFFIC, ITS, DOT, CITY OF COLUMBUS DOP)									5
SPECIAL	53000200	LS			LS		STRUCTURES: PERMANENT UTILITY SUPPORTS (AEP DUCTS)									5
SPECIAL	53000600	4258	1774	6032		SF	STRUCTURES: PRECAST FACADE PANELS	4258	1774							5
607	98000	20		20		FT	FENCE, MISC.: WALL MOUNTED TYPE A (W/ VANDAL MESH)	4.5				15.5				1746A
625	10620	6	2	8		EACH	LIGHT POLE ANCHOR BOLTS, MISC.: COMBINATION SIGNAL POLE AND PEDESTRIAN POLE ANCHOR BOLT ASSEMBLIES EMBEDDED IN CONCRETE BRIDGE DECK					6	2			4
2 SPECIAL	69098100	1650			1650	FT	5" XHW FIBERGLASS CONDUIT					1650				5

NO.	DESCRIPTION	REV. BY	DATE
2	ADDED/CORRECTED ITEMS/QUANTITIES	DJC	11-12-2021

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING CODE CHANGE/ADDED ITEM/ REVISED ITEM	CWL/RFV	11-29-2021

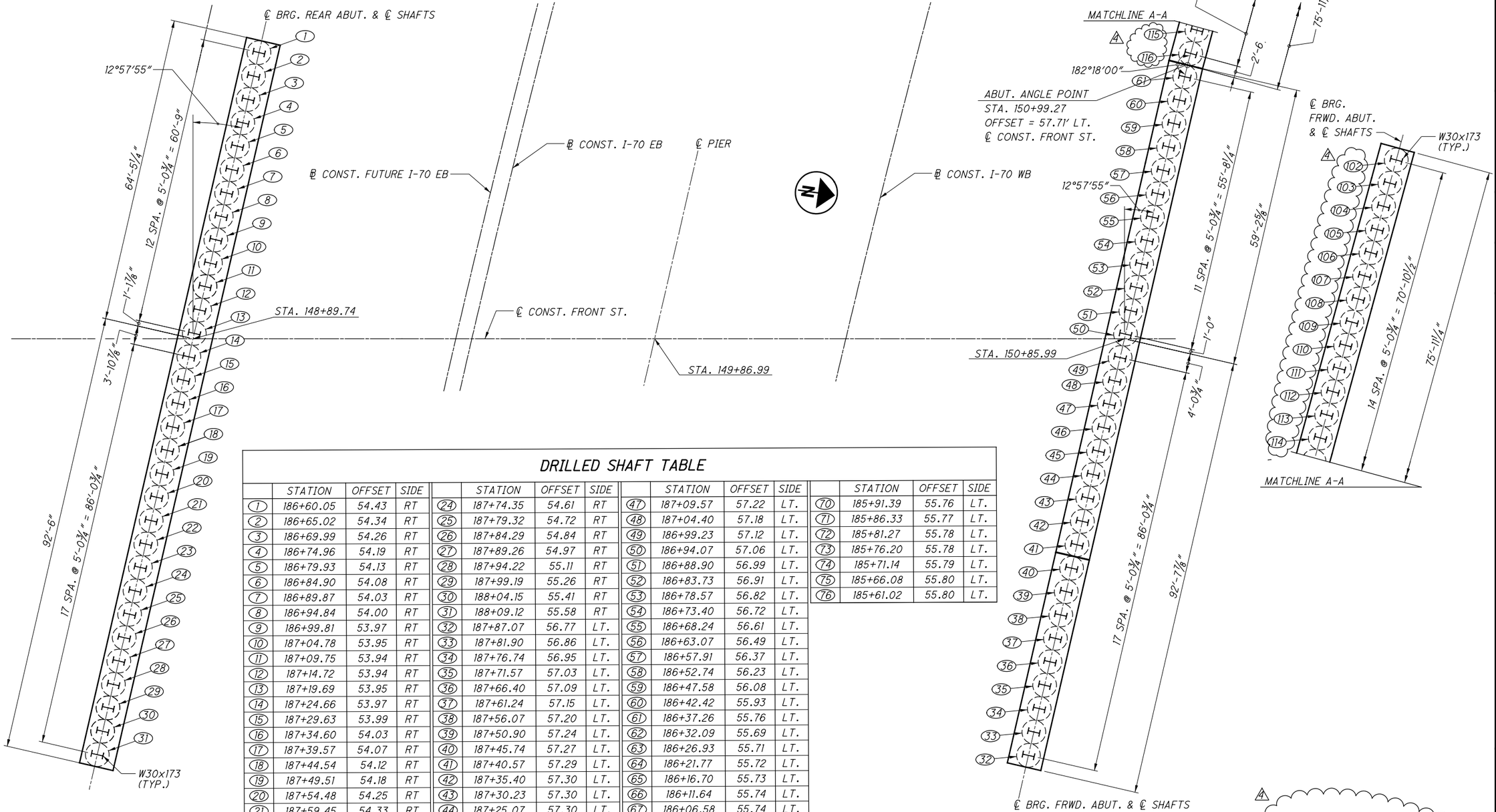
DESIGN AGENCY
GPD GROUP.
Cities, P/Ts, Schools, Burns & Dickerson, Inc.
5500 Wadsworth Street, Suite 150, Columbus, Ohio 43235 614.210.0731

DESIGNED RFV | DRAWN RFV | REVIEWED DGN | DATE 9-6-19
CHECKED DJC | REVISED | STRUCTURE FILE NUMBER 2510023

ESTIMATED QUANTITIES - EASTBOUND
BRIDGE NO. FRA-70-1395C
S. FRONT STREET OVER I-70/71

FRA-70/71-12.68/14.86
PID No. 105523

1687
1815



DRILLED SHAFT TABLE

	STATION	OFFSET	SIDE
1	186+60.05	54.43	RT
2	186+65.02	54.34	RT
3	186+69.99	54.26	RT
4	186+74.96	54.19	RT
5	186+79.93	54.13	RT
6	186+84.90	54.08	RT
7	186+89.87	54.03	RT
8	186+94.84	54.00	RT
9	186+99.81	53.97	RT
10	187+04.78	53.95	RT
11	187+09.75	53.94	RT
12	187+14.72	53.94	RT
13	187+19.69	53.95	RT
14	187+24.66	53.97	RT
15	187+29.63	53.99	RT
16	187+34.60	54.03	RT
17	187+39.57	54.07	RT
18	187+44.54	54.12	RT
19	187+49.51	54.18	RT
20	187+54.48	54.25	RT
21	187+59.45	54.33	RT
22	187+64.42	54.41	RT
23	187+69.39	54.51	RT
24	187+74.35	54.61	RT
25	187+79.32	54.72	RT
26	187+84.29	54.84	RT
27	187+89.26	54.97	RT
28	187+94.22	55.11	RT
29	187+99.19	55.26	RT
30	188+04.15	55.41	RT
31	188+09.12	55.58	RT
32	187+87.07	56.77	LT.
33	187+81.90	56.86	LT.
34	187+76.74	56.95	LT.
35	187+71.57	57.03	LT.
36	187+66.40	57.09	LT.
37	187+61.24	57.15	LT.
38	187+56.07	57.20	LT.
39	187+50.90	57.24	LT.
40	187+45.74	57.27	LT.
41	187+40.57	57.29	LT.
42	187+35.40	57.30	LT.
43	187+30.23	57.30	LT.
44	187+25.07	57.30	LT.
45	187+19.90	57.28	LT.
46	187+14.73	57.26	LT.
47	187+09.57	57.22	LT.
48	187+04.40	57.18	LT.
49	186+99.23	57.12	LT.
50	186+94.07	57.06	LT.
51	186+88.90	56.99	LT.
52	186+83.73	56.91	LT.
53	186+78.57	56.82	LT.
54	186+73.40	56.72	LT.
55	186+68.24	56.61	LT.
56	186+63.07	56.49	LT.
57	186+57.91	56.37	LT.
58	186+52.74	56.23	LT.
59	186+47.58	56.08	LT.
60	186+42.42	55.93	LT.
61	186+37.26	55.76	LT.
62	186+32.09	55.69	LT.
63	186+26.93	55.71	LT.
64	186+21.77	55.72	LT.
65	186+16.70	55.73	LT.
66	186+11.64	55.74	LT.
67	186+06.58	55.74	LT.
68	186+01.52	55.75	LT.
69	185+96.45	55.76	LT.
70	185+91.39	55.76	LT.
71	185+86.33	55.77	LT.
72	185+81.27	55.78	LT.
73	185+76.20	55.78	LT.
74	185+71.14	55.79	LT.
75	185+66.08	55.80	LT.
76	185+61.02	55.80	LT.

NOTE: STATIONS AND OFFSETS FOR DRILLED SHAFT NOS. (1) TO (31) GIVEN TO ℄ CONST. FUTURE I-70 EB
STATIONS AND OFFSETS FOR DRILLED SHAFT NOS. (32) TO (76) GIVEN TO ℄ CONST. I-70 WB

5'-0" DIAMETER DRILLED SHAFT PLAN

(4) **NOTE:** DRILLED SHAFT DESIGNATIONS (102) THRU (116) ARE INCLUDED FOR PAYMENT WITH BRIDGE NO. FRA-70-1390C.

NO.	DESCRIPTION	REV. BY	DATE
4	DRILLED SHAFT REVISION AND NOTE	RFV	11-29-2021

DESIGN AGENCY
GPD GROUP.
Cities, P.Es, Schorer, Burns & Erickson, Inc.
8800 Watermark Drive, Suite 150, Columbus, Ohio 43215 614.210.0731
Copyright: Glaus, Pyle, Schomer, Burns & Deihaven, Inc. 2015

DESIGNED	DRAWN	REVIEWED	DATE
DGN	RFV	TJW	9-6-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJC		25100023	

DRILLED SHAFT PLAN
BRIDGE NO. FRA-70-1395C
S. FRONT STREET OVER I-70/71

FRA-70/71-12.68/14.86
PID No. 105523

9 / 65

1690
1815

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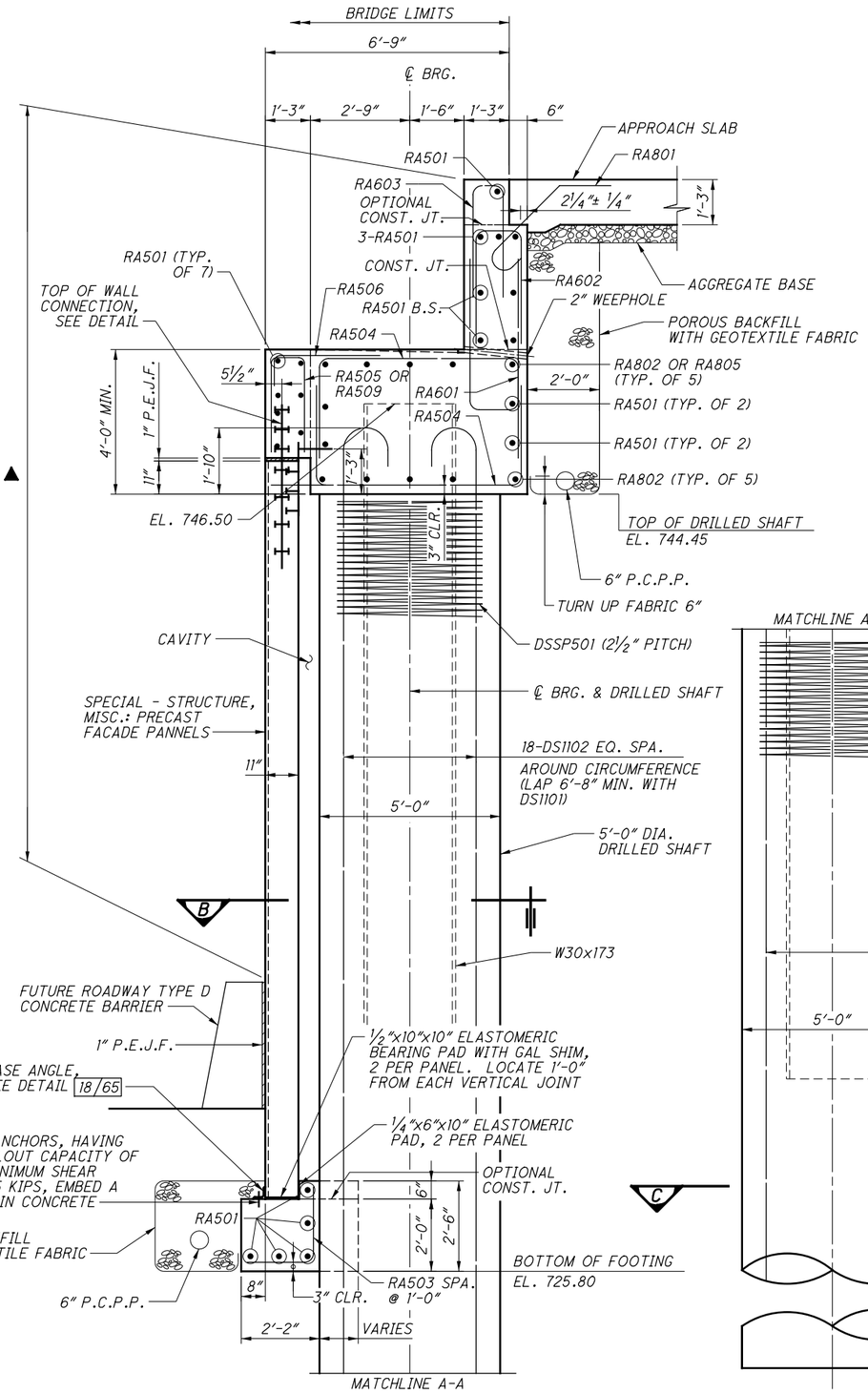
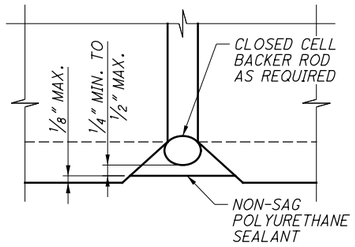


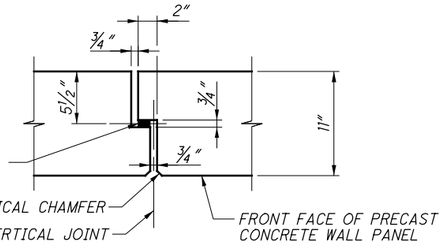
SECTION A



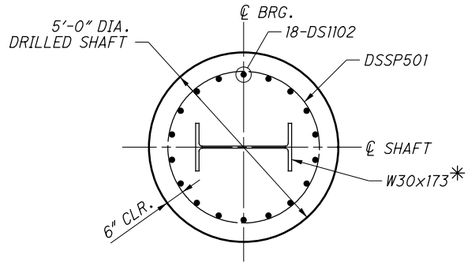
CAULKING DETAIL

TYPICAL ALL PRECAST PANEL JOINTS

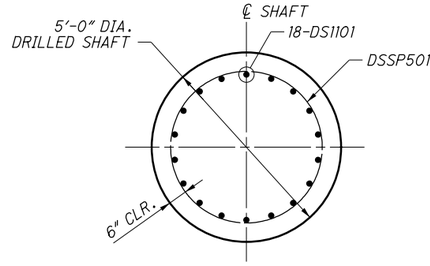
1"x1" CLOSED CELL NEOPRENE FILLER
(DO NOT SEAL BOTTOM 1'-0")
INCLUDED IN BID ITEM SPECIAL -
STRUCTURES: PRECAST FACADE PANELS



VERTICAL WALL PANEL JOINT DETAIL

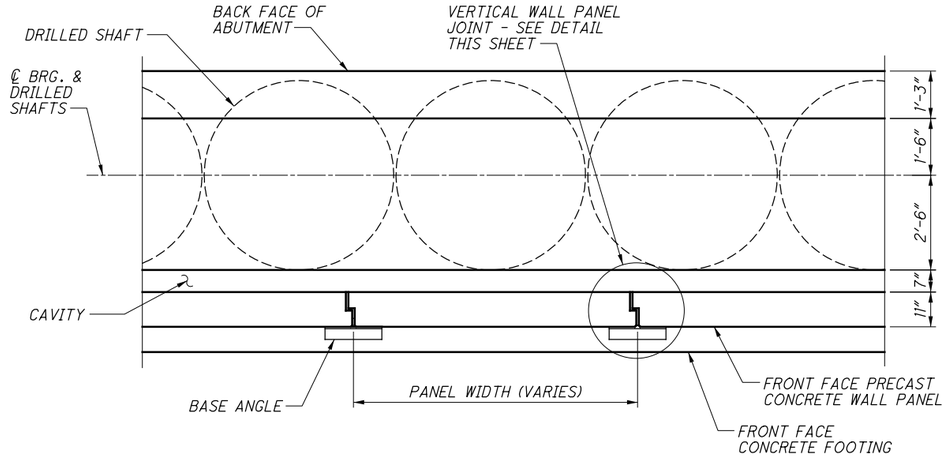


SECTION B



SECTION C

*EXTEND W30x173 SECTION TO AT LEAST EL. 697 (OR BELOW) AND PROJECT IT 2'-6" MIN. INTO THE BOTTOM OF THE ABUTMENT SHAFT CAP



TYPICAL DRILLED SHAFT AND FOOTING PLAN

NOTES:

1. FOR PRECAST FACADE PANELS DETAILS, SEE SHT. NO. 18/65 .
2. FOR ABUTMENT DRAINAGE DETAIL, SEE SHT. NO. 19/65 .
3. FOR LOCATION OF SECTION A, SEE SHT. NOS. 11/65 & 12/65 .
4. POROUS BACKFILL WITH GEOTEXTILE FABRIC: 2'-0" x 2'-6" SHALL EXTEND LATERALLY TO THE ENDS OF THE 6" DIA. PERFORATED CORRUGATED PLASTIC PIPE IN FRONT OF THE WALL PANEL FOOTING.
5. POROUS BACKFILL WITH GEOTEXTILE FABRIC SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE 6" DIA. PERFORATED CORRUGATED PLASTIC PIPE BEHIND THE ABUTMENT CAP ON TOP OF THE SHAFTS.
6. W30X173 STEEL SECTION EMBEDDED IN THE THE ABUTMENT DRILLED SHAFTS TO BE INCLUDED FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 1. THE STEEL SHALL BE COATED WITH A SHOP APPLIED PRIME COAT CONFORMING TO CMS 514.

LEGEND:

▲ - INDICATES LIMITS OF ITEM 512 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

NO.	DESCRIPTION	REV. BY	DATE
4	ADDITIONAL NOTE	RFV	11-29-2021

DESIGN AGENCY
GPD GROUP.
Cons. Pvts.-Schorer, Burns & Erdelyi, Inc.
8800 Watermark Drive, Suite 150, Columbus, Ohio 43215 614.210.0731

DESIGNED	DRAWN	REVIEWED	DATE
DGN/RSN	RFV	TJW	9-6-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJC		25100023	

REAR ABUTMENT SECTIONS
BRIDGE NO. FRA-70-1395C
S. FRONT STREET OVER I-70/71

FRA-70/71-12.68/14.86
PID No. 105523

13 / 65

1694
1815

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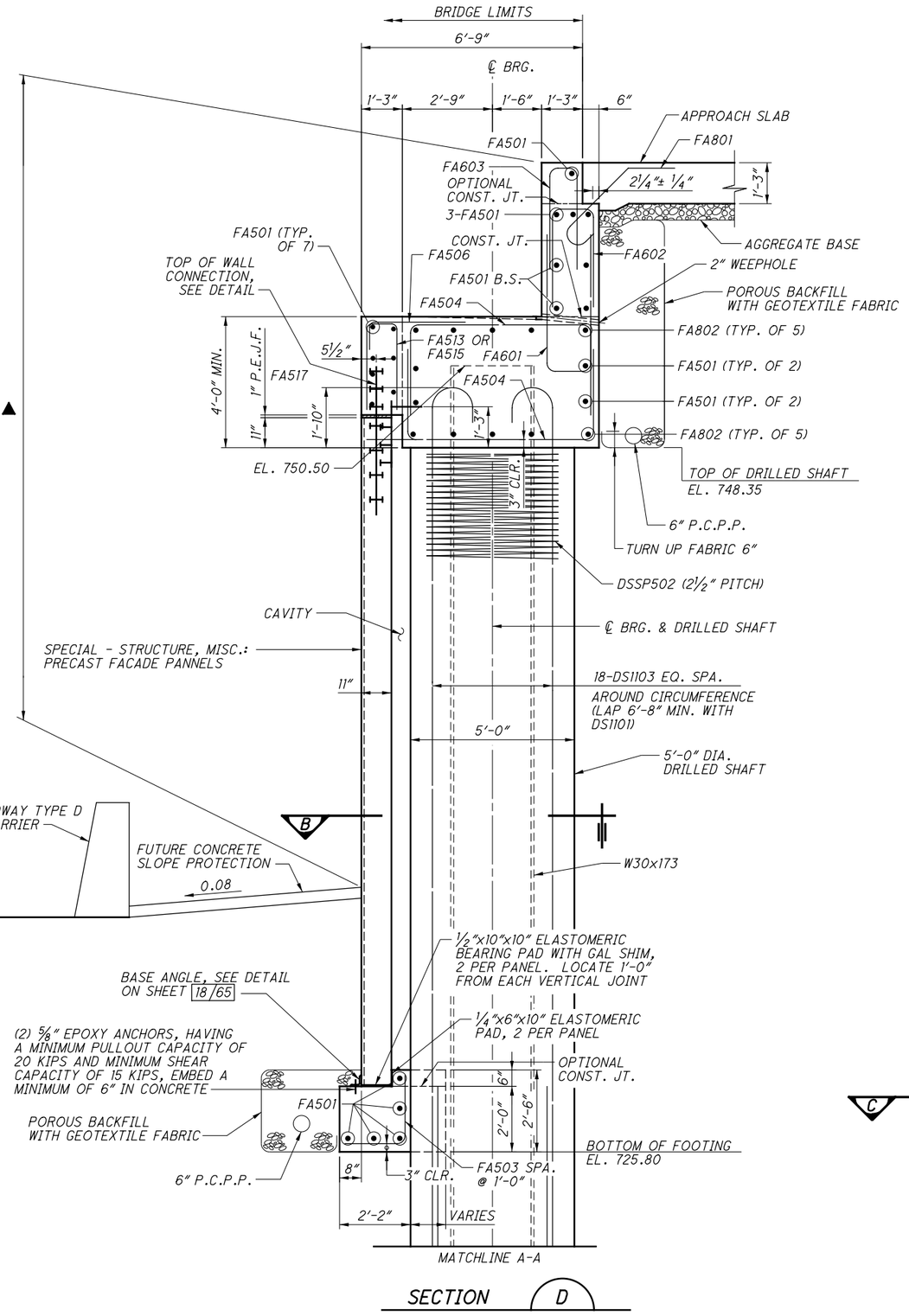
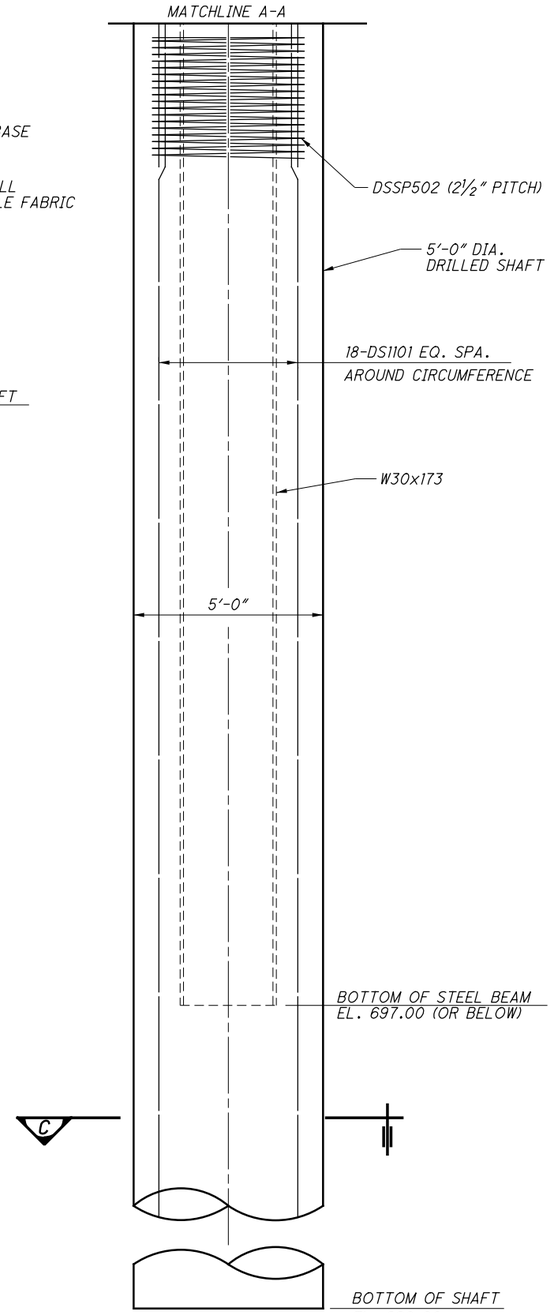
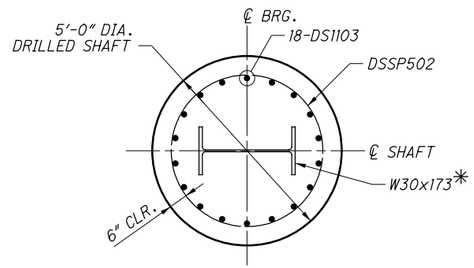




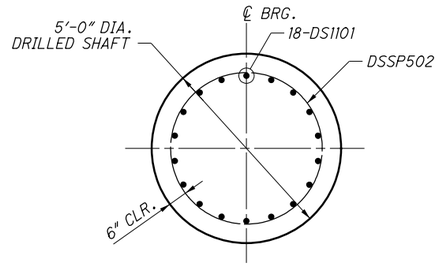
LEGEND:

▲ - INDICATES LIMITS OF ITEM 512 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)



SECTION B

*EXTEND W30x173 SECTION TO AT LEAST EL. 697 (OR BELOW) AND PROJECT IT 2'-6" MIN. INTO THE BOTTOM OF THE ABUTMENT SHAFT CAP



SECTION C

NOTES:

1. FOR PRECAST FACADE PANELS DETAILS, SEE SHT. NO. 18/65
2. FOR ABUTMENT DRAINAGE DETAIL, SEE SHT. NO. . 19/65
3. FOR LOCATION OF SECTION D, SEE SHT. NOS. & 15/65 16/65
4. FOR VERTICAL WALL PANEL JOINT DETAIL, AND DRILLED SHAFT AND FOOTING PLAN DETAIL, SEE SHT. NO. 13/65.
5. W30X173 STEEL SECTION EMBEDDED IN THE THE ABUTMENT DRILLED SHAFTS TO BE INCLUDED FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 1. THE STEEL SHALL BE COATED WITH A SHOP APPLIED PRIME COAT CONFORMING TO CMS 514.

NO.	DESCRIPTION	REV. BY	DATE
4	ADDITIONAL NOTE	RFV	11-29-2021

DESIGN AGENCY
GPD GROUP.
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
8800 Lyra Drive, Suite 350, Columbus, Ohio 43240 614.210.0731

DESIGNED	DRAWN	REVIEWED	DATE
RFV/DJC	RFV	DGN	9-6-19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TJW		25100 23	

FORWARD ABUTMENT SECTIONS
BRIDGE NO. FRA-70-1395C
S. FRONT STREET OVER I-70/71

FRA-70/71-12.68/14.86
PID No. 105523

17 / 65

1698
1815

AE SUMMARY - FRONT STREET BRIDGE

4

PLAN SHEET NUMBER						PARTICIPATION 04/MPO/OT	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	DETAIL SHEET NO.
1750	1751	1753	1756	1757	1761							
												1754
		479				479	605	98000	479	FT	UNDERDRAINS, MISC.: 4" PERFORATED PLANTER UNDERDRAIN	1754
		16				16	611	97200	16	EACH	CONDUIT, MISC.: CLEANOUT STRUCTURE AND PLUG SET WITH 45° WYE	1754
		2				2	611	97200	2	EACH	CONDUIT, MISC.: DRAINAGE OUTLET STRUCTURE	
												1781 to 1784
16						16	625	98000	16	EACH	LIGHTING, MISC.: RECESSED WALL LIGHT- TYPE 1	1781 to 1784
5						5	625	98000	5	EACH	LIGHTING, MISC.: SEATWALL LIGHT TYPE 2	1781 to 1784
20						20	625	98000	20	EACH	LIGHTING, MISC.: TRELLIS LIGHT TYPE 3	1781 to 1784
4						4	SPECIAL	63097700	4	EACH	SIGNING, MISC.: BRIDGE PYLON ALUMINUM LETTERS	1811 and 1814
					774	774	661	14001	774	EACH	PERENNIALS, LIRIOPE MUSCARI 'BIG BLUE'- BIG BLUE LILYTURF, AS PER PLAN	1222
					36	36	661	20041	36	EACH	DECIDUOUS SHRUB. 2' HEIGHT, AS PER PLAN - HYDRANGEA QUERCIFOLIA 'MUNCHKIN'	1222
					82	82	661	20041	82	EACH	DECIDUOUS SHRUB, 2' HEIGHT, AS PER PLAN - ROSA 'RADTKO'	1222
					100	100	661	30061	100	EACH	EVERGREEN SHRUB, 2' HEIGHT, AS PER PLAN - BUXUS X 'GREEN VELVET'	1222
					55	55	661	99900	55	EACH	PLANTING, MISC.: ORNAMENTAL GRASS, 24" HEIGHT, AS PER PLAN - CALAMAGROSTIS ACUTIFOLIA 'KARL FOERSTER'	1222
					430	430	661	99900	430	EACH	PLANTING, MISC.; ORNAMENTAL GRASS, 6" HEIGHT FESTUCA GLAUCA 'ELIJAH BLUE', #1 CONTAINER	1222
					28	28	661	99900	28	EACH	PLANTING, MISC.; ORNAMENTAL GRASS, 24" HEIGHT, AS PER PLAN - SCHIZACHYRIUM SCOPARIUM 'SMOKE SIGNAL', #2 CONTAINER	1222
					736	736	661	99900	736	EACH	PLANTING, MISC.: 12-14 cm BULB, NARCISSUS 'SHERBORNE'- SHERBORNE DAFFODIL, AS PER PLAN	1222
					430	430	661	99900	430	EACH	PLANTING, MISC.; GROUNDCOVER, 12" SPREAD SEDUM RUPESTRE 'ANGELINA', #1 CONTAINER	1222
					350	350	661	99900	350	EACH	PLANTING, MISC.; GROUNDCOVER, 8" SPREAD SEDUM HISPANICUM 'BLUE CARPET', #1 CONTAINER	1222
					20	20	661	99900	20	EACH	PLANTING, MISC: DECIDUOUS TREE, 14' HEIGHT, AS PER PLAN - MAGNOLIA VIRGINIANA 'JIM WILSON'	1222
					59	59	661	99900	59	EACH	PLANTING, MISC: EVERGREEN SHRUB, 18" SPREAD, AS PER PLAN - JUNIPERUS CONFERTA 'BLUE PACIFIC'	1222
2						2	SPECIAL	68014550	2	EACH	TRASH (LITTER) RECEPTACLE	1785
												1785
				1		LS	SPECIAL	68043100	1		COMPLETE IRRIGATION SYSTEM	1798 to 1800
14						14	SPECIAL	69098000	14	EACH	FRONT STREET ALUMINUM PLANTER POT TYPE A	1771
56						56	SPECIAL	69098000	56	EACH	SKATE GUARDS - TYPE A	1767 to 1769
143						143	SPECIAL	69098000	143	EACH	SKATE GUARDS - TYPE B	1767 to 1769
1						LS	SPECIAL	69098400	1		ARCHITECTURAL PRECAST CONCRETE PLANTERS (FRONT ST BRIDGE)	1801 to 1803
		1				LS	SPECIAL	69098400	1		COMPLETE PLANTER WATERPROOFING SYSTEM (FRONT ST BRIDGE)	1804
1						LS	SPECIAL	69098400	1		ARCHITECTURAL TRELLIS (FRONT ST BRIDGE)	1750 1766 1768 1769 1772
												1776-1778
1						LS	SPECIAL	69098400	1		ILLUMINATED SCREEN WALL (FRONT ST BRIDGE)	1781 to 1784
			295			295	SPECIAL	69098700	295	CY	TREE AND PLANTS SOIL MIX FURNISHED & PLACED, AS PER PLAN (24" DEPTH UPPER HORIZON)	1790 to 1793
			110			110	SPECIAL	69098700	110	CY	TREE AND PLANTS SOIL MIX FURNISHED & PLACED, AS PER PLAN (9" DEPTH LOWER HORIZON)	1790 to 1793

NO.	DESCRIPTION	REV. BY	DATE
4	FUNDING SPLIT CODE CHANGE	MKSK/ LHW	11.26.2021

3486-E

MKSK
LANDSCAPE ARCHITECTURE + URBAN PLANNING

CALCULATED | CHECKED

AESTHETIC ENHANCEMENTS SUMMARY

FRA-70/71-12.68/14.86

1748
1815

P:\2013\c1381.06-70-71 4R & 4H\MICROSTATION\4R (105523)\Sheets\105523PN101a.dgn Sheet 11/18/2021 2:07:47 PM lhwilson